THE LANCET.

LECTURES

ON THE

THEORY AND PRACTICE OF PHYSIC,

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Lecture XXVI.

Of Local Diseases.

Gentlemen,

Having, in the preceding Lectures, treated *fully of inflammation, hæmorrhage*, and *dropsy*, which, as I remarked, may be termed *general diseases*, as being liable to occur (though at different times) in all, or, at least, in various parts of the body, I shall now proceed to speak of the affections of individual parts, or what are called *local diseases*, in contradistinction to the former; not admitting the existence of *universal diseases*, in the sense commonly understood, that is, as primary affections of the whole system, for reasons which I before stated to you.

Every individual part or organ, besides being subject to the general affections already described, has likewise its particular affections, arising out of the peculiarity of its structure and functions, and which are marked by appropriate signs or symptoms in each case. And thus there are at least as many different diseases, as there are parts or organs in the body. But, in fact, diseases are far more numerous than this; as most parts may be affected in different ways, according as the structure and functions are more or less complicated: while every variety will be found to have more or less influence on practice. It becomes necessary, therefore, to study diseases individually, and in all their varieties; thus rendering it a subject of great extent, as well as difficulty. In an inquiry of so extensive a nature, it is of advantage to adopt some kind of arrangement, were it only for the purpose of aiding the memory, which is always much assisted by method, however artificial. But the advantage of method is still greater, when some natural connexion can be traced, so as to allow of an arrangement being formed upon principle; and this you will find to be the case, on the present occasion.

Whenever a number of parts are engaged in the performance of a common office, they are always observed to be linked together by strong ties of sympathy, in consequence of which, they mutually influence each other, both in health and in disease; and are therefore best studied in connexion, both physiologically and pathologically. Thus a basis is laid for an arrangement, or classification of organs, and, at the same time, of the diseases to which they are liable, founded on a community of function. According to this plan, diseases, numerous as they are, may be all reduced to a few general heads or classes, by which the study of them is greatly facilitated, and in some degree abridged. This mode of arranging diseases is both natural and scientific, as being founded on *physiology*, which, as I formerly observed to you, is the only proper basis upon which the science of medicine can be built.

The first effect of the proposed arrangement, if successful, will be, the assigning the proper seats of diseases; for every disease, however obscure its intrinsic nature or essence, must of necessity be an affection of one or more of the corporeal organs; or, to express it differently, every disease must have its particular seat in the body, though it may not be at all times easy, or even possible, to assign it: there may be still a few, that we are unable to refer to their proper seats; and this appears to be the case with some of the diseases unmeaningly termed *nervous*. Such, in the present state of our knowledge, must be considered as anomalies in the general system, which time, and the further advancement of physiology, may

reasonably be expected to elucidate, and bring within the general rule.

Agreeably with the principle now laid down, the following *classes* of diseases may, I think, be usefully established, which will be found to include all those of which we have any tolerably distinct knowledge. The order I have chosen, appears to be supported by an obvious dependence, and natural succession of phenomena; as will, I trust, be obvious to you on a little reflection.

1. We may begin with the organs engaged in supplying the waste that is continually taking place in the body, the *chylopoietic*, or *digestive apparatus*, the diseases of which, therefore, constitute the *first class*; including those of the whole tract of the alimentary canal, as well as of the subsidiary organs, the *liver*, *spleen*, and *pancreas*.

2. Then comes the *absorbing system*, (the *lacteals*, with the mesenteric glands,) by which the newly-digested matters are taken up from the alimentary canal, and carried into the general circulation. To this head belong likewise, the *lymphatic absorbents*, and the glands devoted to them.

3. The *organs of respiration*, by which the new matters are further assimilated, and converted into real blood: these organs comprise the *air-passages*, the *lungs*, and the *respiratory muscles*.

4. The *sanguiferous system*, serving to distribute the blood from the heart to every part of the body, and back again; after having performed its destined offices, of adding new matter to the body, and furnishing the materials, out of which the different *secreted* fluids are formed by their respective organs. This group consists of the *heart*, *arteries*, and *veins*; the diseases of which, if not numerous, are yet of considerable importance.

5. The *excretory organs*, or *emunctories*, as they were formerly called, for the purpose of carrying out of the body the superfluous or useless matters, which, by retention, might become noxious. The chief of these are the *intestinal canal*, and the *urinary organs*; both of which are the seats of many of our most painful and formidable diseases.

All the parts now enumerated, may be considered as serving the purposes of the individual, almost exclusively; and which he may be said to possess in common with the whole of living nature, vegetable, as well as animal: and hence they have been called by some physiologists, the organs of the *vegetative* functions, which include both the *vital* and *natural functions*, of the older writers.

But there is another order of parts that are destined to higher purposes, the establishing a communication of the individual with the rest of nature; by which alone, we become conscious of the existence of other beings,—are enabled to judge of their qualities and fitness,—and to approach or avoid them accordingly. To these, the term *nervous system* has been applied. It includes not only the structures termed *nerves*, but the *encephalon*, or general contents of the cranium, together with the *spinal chord*, usually termed *marrow*, but which may with more propriety be considered as a prolongation of the united portions of the *cerebrum* and *cerebellum*. This order of parts is not only most important in regard to the functions which they perform, and which are of the highest kind, namely, *sensation*, *voluntary motion*, and *mind* (called altogether the *sensorial functions*,) but as being, in its different parts, the seat of a great variety of the most striking and formidable diseases to which the body is liable.

The disordered states of the *nervous system*, therefore, make a 6th *class*; to which the affections of the *voluntary muscles*, as the effective agents of this system, essentially belong. Nor, indeed, can the *bones*, with their appendages, the *ligamentous structures*, be altogether excluded from this head; for they may be considered as the *mechanical* instruments, by which the ultimate purposes of the will are accomplished. As the diseases of the *osseous* and *ligamentous* structures, have some striking peculiarities in regard to practice, it becomes necessary to consider the subject apart; the morbid affections of these, therefore, may constitute a 7th *class*. An 8th, might be made of the diseases of the *organs of reproduction*, or the *generative system*, a subject on which I shall probably not enter. The common integument, the *skin*, performs offices of so various a nature, as to require separate consideration. The *skin* is the chief seat of one of the most important of the senses, the *sense of touch*, and at the same time, affords a common covering to the body, forming it into one whole, and serving, to a certain extent, to defend the more delicate parts beneath, from external injury. The diseases of this part, therefore, make an additional, or 9th *class*.

There are still some diseases which, although their seats may be determined, are yet of so peculiar a nature, and so different in their characters and treatment, as to demand a separate consideration; while, for the purposes of practice, they can scarcely be connected with any of the preceding classes. Such are *scrofula*, *syphilis*, *scurvy*, *cancer*, and per-

haps others that we are less acquainted with. These may be termed *specific diseases*, and make a part at least of the *anomalies*, before spoken of. These, therefore, will constitute a 10th *class*.

In pursuance of the plan laid down, I shall now direct your attention to the *first class*.

Diseases of the Digestive System.

The *digestive apparatus* consists of the alimentary canal, commencing at the mouth, and terminating at the anus; including the tongue, teeth, salivary and lymphatic glands, the fauces, œsophagus, stomach, and the small and large intestines; together with the accessory organs, the liver, pancreas, and spleen.

These parts differ more or less from one another, in structure and in office; and are, in consequence, the seat of a number of diseases, sufficiently distinct in their nature and treatment, to require separate consideration. To enable you the better to understand the subject, I shall point out, as briefly as possible, the uses of the different parts just enumerated, and then proceed to speak of the diseases to which they are liable.

The *mouth* is the first receptacle for the food, the quality and fitness of which is judged of by the *tongue*, or organ of *taste*, (as had indeed been previously done by the organ of *smelling*.) The food is then masticated by the *teeth*, and moistened by the secretion from the *salivary glands*; being carried back into the *fauces*, it is thence passed into the *œsophagus*, down which it is conveyed by the muscular contractions of this tube. On reaching the *stomach*, it is retained there, commonly for some hours, and subjected to the action of the *gastric* fluid, when it is said to be *digested*; after which, it passes from this organ into the beginning of the *intestinal canal*, the *duodenum*, where it becomes mixed with the *pancreatic* fluid, and the *bile*, each furnished by its respective organ. The food thus altered and converted into a milk-like fluid called *chyle*, is in a fit state to be absorbed by the *lacteals*, and carried into the veins near the heart, where it is mixed with the venous blood, and, along with this, sent to the lungs, in order to be subjected to the influence of the atmosphere in respiration; by which, it becomes *arterial blood*, and is thereby fitted for the general purposes of the system.

The refuse part of the food, that which has not been taken up by the lacteal absorbents, is gradually carried onwards through the intestines, by the muscular action of the tube, (called the *vermicular* or *peristaltic motion*,) until it is at length evacuated by the anus.

Now the whole of the *alimentary canal*, (like the *air-passages*,) is lined by a *mucous membrane*, which is subject to the affections that belong to this kind of structure in general; namely, inflammation, with its consequences, and which has received different names, according to the particular part it occupies. These, which are mere *varieties*, have been considered as different *species* of disease; although, pathologically considered, they are essentially the same, and require a treatment, in all essential points alike, doubtless with some modifications, arising out of their relative connexion with other parts. We have no general term in common use like that of catarrh to express an inflammation of the lining membrane of the alimentary canal altogether; but the affections of particular parts of it, have had *specific* names given to them. Thus, when that part of the mucous membrane which lines the mouth, is affected with inflammation, it constitutes the disease termed *aphtha*, or the *thrush*. When the fauces are similarly affected, the disease is termed *cynanche* or *angina*; in common language, the *sore throat* or quinzy.

In the œsophagus and stomach, the affection is termed *cardialgia* or *heart-burn*, in the small intestines, *diarrhœa*; in the large intestines, *dysentery*. And when the whole alimentary canal is at once similarly affected, the disease has been termed *cholera morbus*.

Now, although the affection is essentially the same in all these cases, and governed by the same general laws, there are nevertheless peculiarities in regard to each, which require notice, and which arise partly from some differences in their functions, and partly from their connexion with neighbouring parts; we must therefore take them in order, beginning with the *mouth*, the inflammation of the lining membrane of which, is termed *aphthæ* or *thrush*.

1. This disease (*aphthæ*) is characterized by the appearance of minute vesicles, scarcely larger than pins' heads, of a whitish or pearl like hue, with a red base. They commonly are first seen on the tongue, and spread gradually to the gums, the inside of the cheeks, and the fauces, as far back as can be seen; at first, the white vesicles are solitary, and more or less thinly scattered over the surface; but by degrees they increase in number and are thickly clustered, so as in some cases to cover the whole of the surface, giving it a milk-white appearance altogether. In some instances the co-

lour of the incrustations is dark or brownish, indicating a more unfavourable state of the disease. A similar appearance is sometimes observed at the extremity of the rectum, and then the nurses say "the thrush has gone quite through the child," meaning, that the whole tract of the alimentary canal is in a similar state. This, however, is not probable, as the structure is different. The vesicular character belongs to the skin exclusively, which can not be traced beyond the fauces, nor but a little way within the anus. On many occasions, however, the whole alimentary canal is in a state of great disorder and irritation, if not of actual inflammation; though, if examined, it would not probably present the same appearance as in the mouth. The disease is attended with considerable soreness of parts, and generally with more or less of a febrile state of system. If the crusts are forcibly rubbed off, they are soon reproduced, by a fresh production of cuticle, of which the crusts appear to consist.

This disease is sometimes a *primary* affection, arising without any obvious cause, and is then of little moment. It is of far more frequent occurrence in infants than in adults, and generally makes its appearance soon after birth; it is mostly owing in them to the use of improper food; as in children that are brought up "by hand," as the expression is, that is, upon vegetable food, instead of the mother's milk. In many cases, *aphthæ* are a secondary affection, arising out of some general febrile state of system, especially when this has been of long standing; as in cases of *hectic fever*. It often appears also towards the end of ordinary idiopathic fever, especially those of a violent or malignant kind, when the crusts commonly assume a brown appearance, and are then justly supposed to indicate danger.

The treatment of this inflammation of the mucous membrane, (for such it is,) is sufficiently simple. When a *primary* affection, it calls only for the use of mild antiphlogistic remedies. When it is a symptom merely of other diseases, these require our chief attention. The best local treatment appears to be the application of very mild *stimulant* and *astringent* remedies; bearing in mind the great sensibility and irritability of the parts concerned. When the disease is the result of improper feeding, the only rational or effectual mode of relief, consists in the restoration of the proper diet. The disease called "canker of the mouth," is only an aggravated state of the same disease, and requires the same general treatment.

2. The *fauces* are the seat of inflammation of different kinds, as well as degrees. This part of the subject, therefore, demands a more detailed consideration. The terms *cynanche* or *angina*, are employed technically, to express inflammation seated in these parts; and which is called in common language, *sore throat*, or quinzy, according to the degree of severity. The varieties of this, I shall proceed to explain to you in my next lecture.

LECTURE XXVII.

Diseases of the Fauces.

The *fauces*, as I observed to you at the termination of the last lecture, are the seat of different diseases, all of them, however, consisting in inflammation, or the consequence of this. The parts concerned are the *tonsil glands*, the *velum palati*, or dependent curtain that separates the mouth from the fauces; the *uvula*; and the *pharynx*, or commencement of the gullet. Inflammation in these parts is termed, in a general way, *cynanche* or *angina*, in allusion to the choking that attends such affection. The mucous membrane is the principal seat of the inflammation in these cases, although the disease often spreads into the cellular membrane beneath it, and then not unfrequently terminates in suppuration.

Inflammation in the fauces has commonly been divided into two *species*, according as the disease is superficial and diffused, or deeper-seated and circumscribed in its extent: the one called, accordingly, the *erysipelatous*; the other, the *phlegmonous* or *inflammatory sore throat*. But these can hardly be considered as different *species* of disease, since they originate in the same cause, and are variously blended together; the difference between them appearing to depend rather upon the habit of the individual than any thing peculiar in the nature of the disease itself. There is, however, a *specific* form of inflammation in those parts that is essentially different from the ordinary kind, and which will be described hereafter.

The general, and indeed the only obvious cause, of common inflammation in the fauces, is the taking cold, as it is called, a cause that, as on other occasions, is extremely uncertain in its action. If the habit is strong and not very irritable, and the disease occurs in winter or spring, the inflammation is usually of the phlegmonous kind. There is then

much pain felt in swallowing, to which there is a constant propensity, from the copious secretion of a viscid mucus; while the swelling is so considerable as to render swallowing difficult as well as painful. The imperfect state of deglutition often occasions a part of the food, or drink, to be regurgitated through the nostrils.

In some instances, the swelling is sufficient to press upon the jugular veins, so as to impede the return of blood from the head, and thus occasion a degree of stupor, or even delirium. Now and then, though rarely, respiration is impeded by the swelling; and another danger is, the spreading of the inflammation into the larynx, so as to destroy the voice, and even to induce symptoms of croup. *Pyrexia* usually attends, (except in very slight cases,) and is of the active or *inflammatory* kind, as it is termed; (though without much propriety, for these terms are equally applicable to the *diffused* species, to be next mentioned); the pulse is strong and full, with only a moderate degree of frequency. This is the *cynanche tonsillaris* of Dr. Cullen, though by no means confined necessarily to the *tonsils*, but equally liable to affect the neighbouring parts — the *inflammatory sore throat* of common language. It has a strong tendency to go into suppuration, and generally does so after it has continued for two or three days in any considerable degree.

This disease is rarely attended with danger, though it is proper you should know, that it does sometimes prove fatal, and this may happen either from the affection of the brain, or from impeded respiration.

The treatment of this variety of *cynanche* is very simple. It requires little more than the common treatment of inflammation, applied according to the degree and stage of the disease. Slight cases require little or nothing to be done, beyond a common attention to regimen. If the brain should appear to suffer, opening the external jugular vein promises the most effectual relief; and if respiration should be rendered so difficult as to endanger life, even tracheotomy may become necessary. In all urgent cases, you should watch narrowly the approach of suppuration, in order to open the abscess as early as possible; and scarification of the parts may be useful, as tending to diminish the swelling in some degree. Gargles are of little use; and the too frequent employment of them is hurtful, while it adds to the distress of the patient.

When the subject of the disease is rather weak than strong, and at the same time of an irritable habit, the inflammation, instead of being circumscribed and phlegmonous in its character, is more likely to be superficial and extensive, so as to occupy all the parts within view; the redness is intense at first, but with little swelling or pain, as compared with the former. White vesicles are apt to form on the inflamed surface, very like the thrush, and which often go into ulceration, with sloughing, to a greater or less extent. These changes are often gone through in the space of a few hours; and the ulcers heal as rapidly. Swallowing is not very difficult in this case; nor is respiration apt to be impeded, unless from the spreading of the inflammation into the larynx, to which indeed there is a stronger tendency than in the former. There is much *pyrexia*, or symptomatic fever, but it is of a different character from the former, being of an irritative kind, and marked by a very quick and frequent pulse, which is also small, if not weak. The skin is usually very hot, and there is much head-ache. This is what has been called the *erysipelatous sore throat*, an improper appellation, as the term *erysipelatous* should be confined to the skin. In this form of the disease, the brain appears to be much disposed to inflammation; this, therefore, is one source of danger; and another is, the spreading of the inflammation into the larynx, giving rise to croup, as before remarked. Slight cases of this kind require only attention to regimen. Strict abstinence, however, is not necessary: the patient may in general be safely left to follow his inclinations on this head. A general prejudice exists against *bloodletting* in this kind of sore throat, from a belief that it will do harm, the disease being supposed to be essentially connected with debility. This is, however, hypothetical. Bleeding, indeed, is not generally required in these cases; but I know, from many trials, that, provided it is done to a moderate extent only, it is not at all prejudicial, but, on the contrary, often salutary. So that if the symptoms, either the local or general ones, are unusually severe, you need not fear to bleed to a moderate extent, proportioned to the general circumstances of the patient.

The same views that led to the rejection of *bloodletting* in this variety of sore throat, led also to the use of *tonics*, and even of active *stimulants*, such as *ammonia* and the *capsicum*; and likewise wine. But there is no more foundation, in theory, for the one opinion than the

other. The use of these means is not perhaps so injurious, in all cases, as might be expected; but they are in general at least unnecessary. The moderate use of wine diluted, and also a light preparation of the *cinchona*, where the pulse is soft and weak and the tongue moist, are, I believe, useful; but not in other circumstances. It is of importance that the skin should be kept cool, and a pure air admitted to the patient.

The two varieties of sore throat which I have now described to you, are merely cases of common inflammation, generally produced by cold, and modified by the habit of the patient merely. There is, however, another very distinct *species* of *cynanche*, or *angina*, of a more formidable nature, but which makes a part only of a more general affection—one of the *specific fevers*, along with which it will be hereafter considered. It has received different denominations, according to its degree, and its combination with a scarlet efflorescence on the skin, with which it is generally attended. *Scarlatina simplex*, *Scarlatina anginosa*, *scarlet fever*, *malignant*, *putrid*, or *ulcerated sore throat*, are all epithets that have been applied to it.

The *cynanche parotidea* of Dr. Cullen (vulgarly, the *mumps*) ranks also with the *specific fevers*, and is not now to be further noticed. The *cynanche pharyngea* differs only in seat from the *cynanche tonsillaris*; the inflammation occupying the *pharynx* more particularly.

The fauces are likewise the seat of some more indolent and chronic affections, which require notice. One of these is the *venereal sore throat*, which must be distinguished from the former, on account of the great difference of treatment that is called for. The distinguishing characters of the *venereal sore throat* can only be sufficiently understood, when the history of the *venereal disease* is given. I may observe, at present, that when deep and foul ulcerations are observed in the throat, the edges of which are abrupt, and their progress slow; without much general disorder of system; and which do not yield to common antiphlogistic treatment; there is much reason to suspect them to be of a syphilitic nature; such characters should lead you to make a more minute inquiry.

The *tonsils* are sometimes much enlarged, from a chronic kind of inflammation; with the inconvenience, at times, of occasioning deafness, by pressing upon the openings into the *eustachian tubes*. The *uvula*, in like manner, often becomes elongated, and, by coming in contact with the back part of the tongue, occasions frequent efforts to vomit, that, unless the cause be known, are apt to excite alarm in the mind of the patient. These states may generally be relieved by astringent applications; or by scarifications; or even a slight application of the *lunar caustic*. In some cases, a removal of the part becomes necessary; but this belongs to surgery. Such affections generally occur in lax habits, that require the use of *tonic*, or even moderately *stimulant* remedies. Occasional purgatives are also useful.

Diseases of the Œsophagus.

The *œsophagus* or *gullet* is of course liable to inflammation, to which, however, no distinct appellation has been given. The inflammation may affect either the lining membrane, or the substance of the part; and the symptoms will vary accordingly. In the former case, there will be a sense of heat and soreness, and which will be aggravated when any thing hot or acrid is swallowed. This affection is commonly occasioned by food or drinks of too stimulating a nature; as it may be also by any other irritating substance swallowed. It in general quickly subsides, and calls for nothing but the simplest antiphlogistic treatment.

Inflammation of the substance of the œsophagus, is a disease of greater moment, on account of the impediment it may afford to deglutition, as well as in other ways. It is not so extensive an affection as the former, but confined commonly to a small portion of the canal, the exact seat of which may be ascertained by the feelings of the patient, especially during the act of swallowing, which is rendered difficult as well as painful, by the contraction of the part, the natural consequence of the inflammation. The pain is often referred by the patient to the back; so that the real seat of the disease may be overlooked, unless attention is paid to the state of deglutition. The inflammation is in some cases productive of much general disorder, and may terminate in suppuration; which indeed is to be suspected, if the symptoms continue with severity for many days. The treatment is exactly that of inflammation in general, and needs not therefore be again particularized. It is obvious that the part should be left at rest as much as may be, and therefore that swallowing should be avoided as far as possible.

The œsophagus is liable also to a slow or chronic kind of inflammation, which produces its usual effects on such a structure, namely, thickening and contraction, and, of course, impeded function; that is,

painful and difficult deglutition. The disease generally comes on slowly, so as for some time to escape notice. The patient then finds a difficulty in swallowing his food, unless it be thoroughly masticated, or is of a soft and liquid kind: there is also felt a degree of heat and soreness in the part: and thin saliva flows abundantly from the mouth. As the disease advances, deglutition becomes more and more difficult, and at length nearly or altogether impossible. The general system begins to be disordered, by the irritation occasioned by the local disease; the pulse becomes frequent, the skin hot, and the tongue furred. The body wastes, partly by the febrile disorder present, but chiefly from the interrupted supply of food: and from these combined causes, the patient is at length destroyed, after lingering for an uncertain period; it may be a few months, or the disease may be protracted even for years. Upon examination after death, the part is found in the state I have mentioned; namely, thickened and contracted, and often ulcerated. Sometimes the tube is found considerably dilated, above the diseased part, and that unequally, either on one side or the other; so that the strictured orifice is not in a line with the upper portion of the tube; making it difficult to pass an instrument into the stomach, for the purpose of keeping the passage open. This chronic inflammation of the gullet has been variously denominated; *dysphagia*, that is pain or difficulty of swallowing; *stricture* of the œsophagus; and even *schirrus* or *cancer*, with which in point of fatality, if not in other respects, it may indeed be compared.

This disease appears to arise spontaneously, that is, from no obvious cause. It very generally proves fatal, as I before stated. The treatment altogether is very unsatisfactory. Inflammation of this kind is hardly within the power of common antiphlogistic means, though such alone hold out any reasonable hopes of success. As long as a tolerable share of general strength remains, it will be proper to employ anti-inflammatory means with caution. Mercury may be subsequently tried, in the hope that it may effect a beneficial change in the disease. It is, however, an equivocal remedy in such cases: quite as likely to do harm as good. There is always much empirical practice resorted to on these occasions: such as the giving *hemlock*, or the *blue pill*, &c.; the use of which can hardly be attended with advantage, but often with injury to the general health.

It becomes necessary at times to use instruments, for the purpose of keeping the passage to the stomach open; but this practice, however necessary, is attended with disadvantage to the disease itself, which cannot but be aggravated by such mechanical violence. There is the uncertainty besides, of passing the bougie in the proper direction, and the chance even of perforating the sides of the œsophagus, if much force be used in a wrong direction. It is of importance to exhibit food of a liquid kind, and which is at the same time the most capable of affording nourishment to the body. Such, unquestionably, is milk, in preference to all others.

Some persons are particularly subject to inflammation in the fauces, upon taking cold. In such, the early use of brandy, as a gargle, often puts a stop to the disease. I have found the internal use of the cinchona, continued for a length of time, prevent, apparently, the recurrence of such attacks, probably, by diminishing the general irritability of the system.

The œsophagus, from its muscular structure, is of course liable to spasmodic contraction. Its natural motion, also, may be inverted, so as to occasion regurgitation of the contents of the stomach, without actual vomiting. Such states are too trivial to be dwelt upon.

FOREIGN DEPARTMENT.

ARCHIVES GENERALES DE MEDECINE, AND JOURNAL DE PHYSIOLOGIE EXPERIMENTALE ET PATOLOGIQUE.

Dr. Serres on the bursting of Aneurisms of the cerebral arteries.

I have divided those cases of apoplexy which are accompanied by an effusion of blood, into two genera. The first I call meningeal apoplexy, (hemato-meningie,) the second, cerebral apoplexy, (hemato-encephalic.) Both of these forms of the disease may be the consequence of the rupture of a vein, of an artery, or of an aneurismal tumour evolved on one or other of the arteries of the encephalon. The first species of the disease, as its name proclaims, especially affects the envelopes of the brain or spinal marrow; the second particularly interests the substance of the cerebro-spinal axis of the nervous system. Each is distinguished from the other by characteristic symptoms. In the meningeal apoplexy, the voluntary motions are not affected with palsy. In the cerebral form of the complaint, on the other hand, the volun-

tary motion is always paralysed in a greater or less degree, and is differently affected, according to the situation in which the fibres of the cerebrospinal axis are ruptured. In both, the effused blood occurs in clots or coagula; in the cerebral apoplexy, it is circumscribed, and lodged in excavations of the encephalon, whilst in the meningeal apoplexy, it is diffused, and may extend over the entire outer surface of the brain, and even into the interior of the ventricles: this difference in the nature of the extravasation is quite characteristic; for in the first case the blood is collected within a circumscribed cavity; and in the second, as the fluid issues from the ruptured vessel, it makes its way between the arachnoid and pia-mater, and gains every point penetrated by these membranes.

Cases of meningeal apoplexy are rare; and even in those which are known, the vessel whose rupture occasioned the hæmorrhage has not been particularized. The cases in which the blood has been shed from an aneurism of some cerebral artery, are still more uncommon. I know but of two cases; one of them I have already published, the other I shall immediately lay before the reader. This circumstance has induced me to join the two together.

Case I.—*Rupture of an aneurism of the Basilar artery.* G. B. Espert, aged 59, a brass-founder, with a strong constitution, short, and very muscular neck, had long been subject to a peculiar sense of weight in the head, to which he could not apply any definite title. This sensation was increased when he made any great exertion, when he walked quickly, or when he had been drinking, a vice to which he was much addicted. On the 4th of February he had an attack of acute pneumonia, and on the 6th, he entered la Pitié. The disease yielded to two venesections, and three applications of leeches to the seat of the pain.

He was soon convalescent, and even thinking of quitting the hospital, when on the 26th he received intelligence of the death of a child to which he was greatly attached.

This news, which reached him unexpectedly, brought on a fainting fit, which continued for some hours. In the evening, symptoms of fever appeared, and the day after, on making my round, I found him with the face flushed, the jugulars swollen, the breathing high, and the chest slightly painful on the right side, the principal seat of the late inflammatory attack; the pulse was hard, full, and quick, and the mental faculties appeared to be greatly blunted. This last symptom occupied my attention but slightly, for it had continued through the whole acute stage of the former complaint. A copious bleeding relieved the patient. Dozing during the night.

28th. Permanent apoplectic state; respiration tardy, pulse frequent, bounding, and very hard, the artery vibrating under the finger; the face red and tumefied. The patient died suddenly at one o'clock, the symptoms never having diminished in intensity.

Before proceeding to open the body, I was induced, from an analysis of all the symptoms, to prognosticate the rupture of some artery within the cranium, and I only erred in regard to the existence of an internal aneurism, of which the annals of science did not to my knowledge record a single instance. No sooner was the cranium opened, than we perceived an immense quantity of black coagulated blood at the basis of the brain. The spinal marrow being divided, the brain was turned back, and then the basilar artery, near the place of its division into branches, was seen to be affected with aneurism. The aneurismal dilatation was an inch in diameter every way, and the sac might be about the size of a small hen's egg. Its form was round, but a little flattened on its superior surface. It was quite empty, and presented a circular opening, with ragged edges, about a line and a half in diameter. The sides of the sac were thin and uniform. The middle tunic possessed that cartilaginous character so frequently observed in the arterial polygon of the basis of the brain. The effused blood might be estimated at about a pound; it had followed all the foldings of the membranes, and along with them had penetrated and distended the lateral ventricles. In other respects the brain and cerebellum were healthy.

Case II. *Rupture of an Aneurism of the anterior communicating Artery of the Brain.*

M. N. Gervais, aged 53, on the morning of 3d January, 1826, fell to the ground in a senseless state. On the 4th, she was brought to La Pitié; the student in attendance ordered twelve leeches to the neck, and blisters to both the legs.

5. The patient was in a state approaching stupor; the face was injected as in advanced organic affections of the heart. This state differed from the ordinary course of apoplectic patients, inasmuch as the eyes were open, the respiration almost natural, and the pulse small and not very frequent. The patient lay on her back without motion, and appeared

to notice nothing that passed around her; although the eyes could be moved freely in every direction, the sight seemed confused, if it were not altogether annihilated; neither did she appear to hear. The jaw could be moved, but with the greatest difficulty. The face, nevertheless, remained sensible at every point, as were the limbs also; the left arm looked as if contracted upon the breast, but it could be placed in any position without an effort. The left leg exhibited no signs of rigidity. As the patient, when excited, did not move a muscle, it was concluded that she was generally paralytic. The left side especially seemed more relaxed than the right. At intervals, some slight convulsive movements were observed, and there was constipation of the bowels and retention of urine.

6th. Same state; the mouth now drawn to the left; the skin cold, the face rather discoloured than red, the pulse small and scarcely to be felt, the patient exhaling a fœtid odour. She died at eleven, a. m.

A very slender acquaintance with the practice of medicine would enable any one to say that this patient had died apoplectic, but in the present state of our knowledge, I deemed it better to be silent upon the species of apoplexy which had here proved fatal, than to hazard mere conjecture in regard to its nature. When the skullcap was removed, we perceived the meningeal veins gorged with blood, and an effusion of the same fluid surrounding the hemispheres, and penetrating into the cerebral anfractuosities; the extravasation was particularly conspicuous about the posterior and lateral parts of the left hemisphere. The brain was removed with every care from its situation; the coagulated blood was washed away by means of a stream of water, and the arteries examined from the basilar forwards. Arrived at the left communicating branch of the arterial polygon, we perceived an erosion of the vessel, but its internal tunic had remained untouched, so that the blood could not have escaped from this point. At length the true source of the hæmorrhage was attained; it had proceeded from an aneurismal pouch, about the size of a musket ball, developed on the right side of the anterior communicating artery of the brain. Pursuing the dissection, I found that the left cerebral artery had also given way. The blood had therefore been shed from two openings. The fluid had penetrated the fissure of Sylvius on both sides, and been effused in this direction along the course of the middle cerebral artery. Anteriorly it had followed the track of the arteria callosa, and been shed over the basis of the anterior lobe of the brain. Posteriorly it had filled the anfractuosities of the posterior lobe of the brain, and those of the surface of the cerebellum. In the vicinity of the pineal gland, the coagulum was a little thicker than elsewhere; the blood had penetrated the lateral ventricles by the cleft that occurs between the thalami and corpus fimbriatum. The choroid plexus contained very little. The pia mater was every where uninjured, a circumstance which makes it probable that the effusion had been rather slow and gradual than very sudden.

The blood had also surrounded the upper part of the tubercular quadrigemina, had penetrated the fourth ventricle, bathing the pons varolii, and, still following the pia mater of the spinal marrow, had flowed around this part to some considerable distance. This enormous extravasation of blood was undoubtedly reason sufficient for the death of the patient. But it did not afford so satisfactory an explanation of all the symptoms; the loss of motion of the left side, the general insensibility could not depend on the presence of the extravasated blood. The brain had, therefore, to be examined in relation to these symptoms. The brain being incised then, we found an alteration in the right half of the centrum ovale, towards the middle part of the radiations of the corpus striatum and optic thalamus. In this situation the brain was disorganized, of a yellowish colour, through an extent of about five lines, and the medullary substance surrounding the altered nucleus, charged with numerous red points. The posterior part of the fornix was also softened; the disorganization here extended to the upper part of the cornu ammonis. The commissura mollis was red and marbled through its whole depth; this appearance stopped suddenly at the point of its origin from the optic thalamus.

The heart was affected with hypertrophy on both sides. The intestinal canal was healthy.

The hemiplegia of the left side was therefore accounted for by the alteration of the right part of the centrum ovale. If there was really general palsy, there would be much more difficulty in accounting for it.

These are, so far as I know, the only two cases of aneurismal dilatation with rupture of the cerebral arteries, which are on record. Morgagni saw an aneurismal dilatation of the internal carotid and basilar. Vieussens found the first of these vessels affected with aneurism in the cavernous sinus, but in both cases the aneurismal sac was entire.

REVIEW.

The Anatomy of the Human Brain, with a general View of Nervous System
By G. SPURZHEIM, M.D.

[Concluded from page 211.]

BEFORE Gall and Spurzheim, anatomists had separated the nerves of four of the external senses, viz. of smell, taste, sight, and hearing, from those of the fifth, or of feeling, they had also assigned the third, fourth, and sixth pairs to motion, and all the other trunks of the medulla oblongata to sensation. Erasistratus had observed perfect voluntary motion in the absence of feeling, and *vice versa*. Pathological facts then directed the attention of physicians to the complexedness of the nervous system, long before anatomists had displayed its structure, or physiologists attempted to assign a station and a name severally to the functions of its parts. The subject has occupied the attention of Gall and Spurzheim, Bell and Magendie, and in their hands the subject has at length assumed much of the harmony and beauty of a system. "Physiological and pathological facts," says our author, "being strikingly and universally favourable to the idea of distinct nerves of feeling and motion, and four of the senses being evidently provided with peculiar nervous apparatuses, I have always maintained the probability of the same law obtaining in regard to the fifth, and even invited anatomists to use their endeavours to verify the point, and to demonstrate the muscular (motores) as distinct from the cuticular nerves," or those of sensation.* To this it has been objected, that the nerves of sensation and of motion issue together and that every fibre of the pair must therefore be alike. "But to this" says Dr. Spurzheim,—

"I always answered that the objection is neither valid on the strength of the fact, nor on that of the inference from it. For the spinal pairs are composed of two roots, the one dorsal, the other abdominal; and further, each root is itself composed of many bundles. I also stated that this structure is less conspicuous in the fifth cranial nerve than in the spinal pairs; but that, nevertheless, the difference of its bundles, and their dissimilar functions, were recognized. One, all allow, is appro-

* There is a remarkable semblance between this passage and the conclusion of the following of Hunter:—"The nerves," says this illustrious physiologist, "being in themselves perhaps the most difficult parts of an animal body to dissect, becomes a reason why we are still unacquainted with many of the minuter ramifications; yet if a knowledge of these, together with that of their origin, union, and re-union, is at all connected with their physiology, the more accurately they are investigated, the more perfectly will the functions of the nerves be understood. I have no doubt, if their physiology was sufficiently known, but we should find the distribution and complication of nerves so immediately connected with their particular uses, as readily to explain many of those peculiarities for which it is now so difficult to account. What naturally leads to this opinion is, the origins and number of nerves being constantly the same, and particular nerves being invariably destined for particular parts. The fourth and sixth pair of nerves are remarkable instances of this; and we may reasonably conclude, that every part has its particular branch allotted to it, and that however complicated the distribution may be, the complication is always regular. There are some nerves which have a peculiarity in their course, such as the recurrent and chorda tympani; and others which are appropriated to particular sensations, as those which go to four of the organs of sense,—seeing, hearing, smelling, and tasting; and some parts of the body having peculiar sensations, (as the stomach and penis,) we may, without impropriety, include the fifth, or sense of feeling. This general uniformity in course, connexion, and distribution, will lead us to suppose that there may be some other purpose to be answered more than the mere mechanical convenience."—*Observations on the Animal Œconomy*, 1786.

priated to taste, while the rest belong to sensation in general. In conformity with the above view, the glosso-pharyngeal has always appeared to me destined to the third sort of the lingual functions, that is, to general feeling. The above ideas were published in my English work, "the Physiognomical System," (p. 23,) and in 1818, in my French work, entitled "Phrénologie," (p. 236.) In all the courses of lectures I have delivered since these works issued from the press, I have broached similar ideas, and encouraged those of my auditors, when opportunity favoured to enter on the inquiry, and to endeavour to trace the nervous fibres from their peripheral expansions to their origin in the spinal chord."—pp. 39, 40.

Hence it appears that Dr. Spurzheim is entitled to the merit of having first assigned distinct offices to the anterior and posterior portions of the spinal marrow. Bell and Magendie have since prosecuted and advanced the inquiry. The former has distinguished an order of nerves which he calls respiratory from those of sensation and motion in general. According to this author, the spinal chord is made up of six columns of nervous matter.

"Each lateral portion of the spinal marrow," he says, "consists of three tracks or columns; one for voluntary motion, one for sensation, and one for the act of respiration, so that the spinal marrow comprehends in all six rods intimately bound together, but distinct in office, and the capital of this compound column is the *medulla oblongata*. The anterior column of each lateral division is for motion, the posterior for sensation, and the middle one for respiration. The two former are extended up into the brain, and are dispersed or lost in it; for these functions stand related to the sensorium; but the latter stops short in the medulla oblongata, being in function independent of reason, and capable of its office independent of the brain, or when separated from it.

It is the introduction of the middle column of the three, viz. that for respiration, which constitutes the spinal marrow, as distinct from the long central nerve of the animals without vertebræ, and which is attended with the necessity for that form of the trunk which admits of the respiratory motions."—pp. 22, 23.

Mr. Bell traced the anterior column of the spinal marrow to the brain, and finds that all the nerves which arise from it are for motion.

"We trace the column," says he, "up into the corpus pyramidale, and find there the origin of the ninth nerve. We see that this nerve has only one series of roots, corresponding with the anterior roots of the spinal nerves, and that these roots come from the *tractus motorius*, and we cannot forget that this nerve is entirely devoted to the muscles of the tongue; that it is the motor of the tongue.

Following up the corpus pyramidale, we find issuing from it the sixth nerve, a muscular nerve of the eye. Still following up the *tractus motorius* through the *pons varolii*, we come to the roots of the third nerve, the motor nerve of the eye. *Thus all the nerves arising in one line from the crus cerebri to the cauda equina are muscular nerves.*"—pp. 33, 34.

"There is an obvious division of the spinal marrow, corresponding to the cerebrum and cerebellum; every regular nerve has two roots from the anterior of these columns, the other from the posterior; such are the fifth pair; the suboccipital; the seven cervical; the twelve dorsal; the five lumbar; and the six sacral; viz. thirty-one pairs of *perfect, regular*, or *double nerves* in the human body. They are common to all animals, from the worm up to man; and are for the purposes of common sensation and motion, or acts of volition; they run out laterally to the regular divisions of the body, and never take a course longitudinal to the body.

For the sake of arrangement the remaining nerves are called *irregular* nerves. These are distinguished by a single fasciculus or root; that is a root from one column. These are *simple* in their origin, irregular in their distribution, and deficient in that symmetry, which characterizes the first class. They are superadded to the original class, and correspond to the number and complication of the superadded organs. Of these there are the third, fourth, and sixth to the eye; the seventh to the face; the ninth to the tongue; the *glosso pharyngeal* to the pharynx; the *nervus vagus* to the larynx, heart, lungs, and stomach; the *phrenic* to the diaphragm; the *spinal accessory* to the muscles of the shoulder; the *external respiratory* to the outside of the chest."—pp. 44, 45.

Mr. Bell has shown, by his experiments, that the facial nerve (portio dura of the seventh pair) may be cut without dimi-

nishing the sensibility of the parts on which it is distributed, the effect of the operation being to divest them of the respiratory motions. On dividing the fifth nerve, however, on the face of an ass, no further sensibility remained than was communicated by certain fibrils of the spinal nerve, which are distributed to the integuments of the jaw. He shows that, like the spinal nerve, the fifth, has an anterior and posterior origin, that "it is in fact the uppermost nerve of the spine."

Mr. Bell has paid particular attention to the facial nerve, as influencing the functions of respiration in those parts to which its ramifications extend. He styles it, in particular, a "*nerve of expression*," and, being a nerve of motion, it may certainly merit the appellation, but since it, "arises by a series of *single* roots," according to Mr. Bell's own theory, it should not perform *two* functions.

"I chanced, very lately," says Dr. Spurzheim, "to see a case where the voluntary motion of the right side of the face was lost, whilst its sensibility remained; both feeling and motion of the left side were intact; the movements of the tongue were also natural, but if the person attempted to spit, the saliva was always thrown to the right side by the action of the left and healthy half of the cheeks and lips."—p. 42.

M. Serres relates the case of an epileptic young man who had a slight affection of the right eye, which gradually increased, and in fine destroyed his vision. The other organs of sense and motion, on the same side, were successively paralysed; the eye, eye-lid, nostril, and half of the tongue lost their powers, while on the left they retained their wonted integrity; the patient died, and his dissection discovered that the ganglion of the fifth pair was enlarged, of a yellow colour, and vascular below; that the nerve itself, at its insertion into the annular protuberance, was converted into a yellow gelatinous looking matter, which penetrated, in little processes, the substance of the protuberance in the direction of the nervous insertions. The muscular branches of the nerve were healthy on the otherwise affected side. Mr. Bell is undoubtedly entitled to the merit of having distinguished the functions of the fifth and facial nerves, and thus of having afforded a certain proof of the difference between nerves of feeling and of motion, but it must be conceded that Dr. Spurzheim first spoke of the spinal column as made up of an anterior and posterior portion, and of the double origin of its nerves.

This distinction of the nervous roots accords with the functions of the spinal mass, but the subject requires further elucidation, for as M. Magendie remarks,

"'When the posterior roots, covered even with their sheaths, are irritated, signs of extreme suffering are manifested; and, what is particularly deserving of notice, contractions of those muscles that receive nerves from below the place so irritated are excited; these contractions, too, only occur on the side of the body the nervous fibres of which are pricked.' According to the observations of the same author, (says Dr. Spurzheim,) the abdominal surface of the spinal chord is not altogether insensible when irritated. The communication between the spinal chord and the nerves of the vegetative functions is also known to be established by means of fibres, which communicate directly with the abdominal roots of the spinal nerves; nevertheless, the will has no influence over the functions of the viscera. Moreover, the fibres of the dorsal roots are evidently larger than those of the abdominal; both are in proportion to the volume of the parts to which they are distributed, and both send off branches that run into muscles. It is improbable, therefore, that the dorsal roots are solely destined to general sensation. Neither does it seem to me at all likely, that the spinal chord and its nerves are mere conductors of sensation, and of volition in reference to motion. I rather conceive that they aid in maintaining the powers of those parts to which they are distributed; for instance, that the muscles, or instruments of motion, acquire their power, in part, through the influence of their nerves, whilst the will to make the muscles act resides in the brain. Thus

I do not believe that the only office of the spinal chord, with its nervous roots, is to establish a communication between external impressions and the brain, and between the brain and the instruments of motion—the muscles. To me it seems probable, that a very small part of the spinal chord suffices for these purposes; the particular portion, or organ, however, cannot, in the present state of our knowledge, be specified. The experiments of M. Magendie prove the abdominal roots to include the conductors of volition; but as each of these is composed of two halves, the one superior, the other inferior, and, in man, of two distinct chords, it would be interesting to repeat and to extend the experiments, and by cutting the halves separately, to ascertain whether both propagate the dictates of the will; or if this task is limited to one, to that namely, which does not communicate with the intercostal nerves. The ganglions of the intercostal nerves, as well as those of the dorsal roots of the spinal chord, may possibly prevent the will influencing the functions of the parts, to which these nerves are distributed."—pp. 47, 48.

Having, as we trust, rendered this part of the subject intelligible, we shall pass over the next of our author's chapters, or "general considerations on the spinal chord of man and animals," which can only be duly appreciated by a diligent perusal, aided by the plates, and proceed to the description of the "pretended cerebral nerves," premising, however, that the above remark applies to this as well as every other part of the volume, and that the pyramidal, olivary, and restiform bodies, are examined in connection with the cerebellum and brain, of which they are parts.

"The opinions of authors upon the origin of the nerves of the head are very various. In general they are derived from the brain, hence their name *cerebral*. But some writers limit the title *brain* to the hemispheres, and join the striated bodies, the optic thalami, the cerebral legs and annular protuberance to the medulla oblongata; or, otherwise, they look on all these as parts of the spinal chord, and then say that no nerve whatever arises from the brain, that is, from the hemispheres immediately. By thus extending the limits of the medulla oblongata and spinal chord, however, parts that belong essentially to the brain are included. The principle we lay down, therefore, that no nerve originates in the brain, and that every nervous part has its own origin, so that the nerves can no more be derived from the brain than can the various nervous pairs from each other, cannot possibly be confounded with any of the foregoing opinions of authors.

The proofs we adduce in support of our position, as to the independent origin of the various nervous parts, are constantly the same; all, therefore, that has been said to demonstrate the spinal chord to be no continuation of the brain, applies to the nerves of the head, and proves that they do not owe their being to the brain, and that no one pair derives its existence from any other. In the first place, the nerves of the head bear no proportion to the brain in size; and then, these nerves exist in acephalous monsters, whose brain never had being. Moreover, the course taken by the nerves towards the cranial holes through which they pass, proves in the most positive manner that they are not continuations of the cerebral fibres. In examining the individual nerves, I shall speak of their several peculiarities, as origin, structure, and connection are concerned.

The nerves of the head, as of the spine, have been long classed into pairs. The number of pairs reckoned, however, varies considerably; sometimes they are said to be seven, sometimes eight, or nine, or according to M. Sœmmerring's method of counting as many as twelve. However, the mode of indicating the several pairs of nerves numerically, and speaking of the first pair, the second pair, the third pair, and so on, possesses no practical advantages, because, besides the number, the functions of each pair must still be learned. It is better, therefore, to designate each pair of the cranial nerves in succession from its functions or its destination.

Some authors have divided the nerves according to their places of detachment, into nerves of the brain, of the cerebellum, of the annular protuberance, and of the medulla oblongata. This attempt at classification was necessarily very deficient, for it is based upon an error in regard to the origins of the nerves; the actual place of origin being confounded with that at which they issue immediately from the general mass."

Gall and Spurzheim maintain, that every nervous part has its peculiar origin, and that the nerves do not *arise* either

from the brain or spinal marrow, or the latter from the former; that they are merely in intimate connection with each other. Hence the latter speaks of "supposed cerebral nerves."

1. The *accessory* nerve, which Mr. Bell calls the superior respiratory nerve of the trunk, arises from the posterior portion of the cervico-spinal mass, and medulla oblongata*. Its filaments vary much in thickness and length, and sometimes it is considerably longer on one side than the other. It recedes from the spinal chord and medulla oblongata, as it approaches the vagus, with which it passes out of the cranium to be distributed on the neck and shoulder.

2. The *pneumogastric* (par vagum) is found in all vertebral animals. In man it issues by numerous filaments between the olivary and restiform bodies, nearer, however, to the latter than the former. Its communications and distributions are well known, but from comparative inquiries, Mr. Bell infers, that it is not essential to the stomach, "as it does not exist but where there are heart and lungs to associate with a muscular apparatus of respiration."

3. The *glosso-pharyngeal* in man, and the mammalia, arises from the medulla oblongata, just before the pneumogastric, by a great many filaments, which, soon uniting, form a trunk to be ramified on the pharynx and muscles of the tongue.

4. The *hypoglossal nerve* (motor linguæ) in man arises partly near the olivary and pyramidal bodies, and partly lower down by several filaments, which are united after the manner of the cervical nerves.

5. The *abductor nerve of the eye*, from the anterior column of the medulla oblongata.

6. The *facial* nerve (communicans faciei) arises from the spinal chord in the same manner as the last. "Its true origin," says Dr. Spurzheim, "is seen in the lower animals, but in man it *seems* to come from the annular protuberance," in consequence of its being either partially or wholly covered by the transverse fibres of that part.

7. *Motor nerve of the eye.* The filaments which afterwards compose this nerve, issue from the blackish body of the crura cerebri. It supplies five of the muscles of the eye.

8. The *nerve of the superior oblique muscle of the eye* (patheticus,) by several filaments from behind the posterior tubercles of the corpora quadrigemina in the mammalia, and from behind the bigeminal bodies in the other classes of animals. Although a nerve of motion, "it arises from the dorsal surface of the nervous mass."

9. The *trigeminal nerve*, from the medulla oblongata*, but we shall set down what Dr. S. says of this nerve in his own words.

"Its place of origin is apparent in those animals, as reptiles, birds, and fishes, which have no annular protuberance, and also in the mammalia, which have it of small size; but in man, the monkey, and other tribes, where this part is very large, the trigeminal *seems* to arise from it; the nerve, however, is, in fact, only covered by some of its transverse fibres, (plate viii. fig. 1,) and the origin of the nerve is, in fact, the same in all animals. To show it in the human kind, the fibres of the annular protuberance that cover it, must of course be dissected away.

The trigeminal nerve is distributed to every part of the face, to the muscles of the forehead, of the eye-lids, nose, lips, jaws, and ears; it communicates with

* According to Mr. Bell, all the nerves of respiration arise in a line with each other, that is, from the middle column of his nervous mass.

* By two distinct origins, "one root coming from the crus cerebri, and the other from the crus cerebelli," the latter having a ganglion like the spinal nerves.—C. Bell. This gentleman's views shall be more fully explained at another opportunity.

the organs of all the five senses, and of voluntary motion, and brings these and the other parts of the body, the face, neck, trunk, and extremities, into mutual relationship. One branch of the trigeminal is ramified on the tongue, and is regarded as the true gustatory nerve. It is therefore, destined to cognize an impression of a specific kind, viz. taste. If some feel disposed to regard taste as a sort of touch, they must at least admit the impossibility of confounding or assimilating this species of perception with sensation in general."

10. The *auditory* nerve comes from the fourth ventricle, and traverses in its course a band of gray substance, lying between the restiform body and the cerebellum. Piccolnomini first described certain white lines, which may commonly be observed in the ventricle, and supposed them to be the origin of this nerve, an opinion now pretty generally adopted.

11 and 12. The *optic nerve*, and *quadrigeminal bodies*. Most anatomists, since Varolius and Eustachius, have supposed the optic nerve to originate in what has been called its thalamus. Others, however, have traced some of its fibres backwards to the anterior of the quadrigemina, and, as Dr. Spurzheim remarks, without much difficulty. The nerve receives many additional fibres, from the tuber cinereum, which joins it without decussating. Gall and Spurzheim agree, that there is "a *partial* decussation of the optic nerves," the fibres of the outermost portions continuing "their course onwards, without decussating." They have come to this conclusion after considering numerous facts and cases which they have themselves witnessed, and which others have recorded.

It seems that the nerve originates in the anterior of the quadrigemina, but that the posterior of these bodies reinforces or perfects it, at least this is the opinion of Dr. Gall, who allows, however, that "the modes in which these two pairs (quadrigemina) assist the function of vision must differ, for they occur in various proportions to each other, in the different species of animals; in some, indeed, the posterior two are scarcely perceptible, or are even entirely wanting, although vision be perfect, as happens in birds."* In delivering his opinion upon this subject, after referring a good deal to comparative anatomy, Dr. Spurzheim remarks, that

"The mammalia alone have quadrigeminal bodies; both pairs, however, have not, I conceive, similar offices, for there is no proportion between them indiscriminately, nor between the bundles of fibres which issue in different directions from each. The fibres of the anterior pair join the optic nerves, those of the posterior plunge under the optic nerves, and are lost in the middle lobes of the brain. The optic nerves communicate by means of superficial bands, while the posterior pair of the quadrigeminal bodies, with the internal and external geniculated bodies, with the middle and anterior cerebral lobes, and with the mass called tuber cinereum."

13. The olfactory nerve, by three roots, one from the fissure of Sylvius, and the others from a sulcus at the posterior part of the anterior lobe.

Having gone over the cerebral nerves, and observed that Drs. Gall and Spurzheim regard them as independent of each other, and, as far as origin is concerned, of the brain, the latter, however, and the cerebellum as added to the nerves of the external senses and of motion; and the entire nervous system, in short, as an aggregate of units intimately connected and in contact with each other, but having no continuous existence, we shall hasten to a close by taking a rapid view of their "method of dissecting the brain," which, however, can hardly be rendered intelligible without a reference to the plates.

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* Sur les Fonctions du Cervean, 8vo. VI. 55.

"The brain should be removed from the cranium, care being taken not to tear the crura at the superior edge of the annular protuberance, (an accident that is very apt to occur,) nor to injure the medulla oblongata at the lower edge of the same part, and to cut the spinal mass so low down as to obtain, besides the entire medulla oblongata, the upper part of the true spinal chord. The brain thus freed from the skull, is then to be put into a plate, with the basis uppermost. The cerebellum and medulla oblongata having lost the support of the bone, now fall backwards. (Pl. vii. fig. 1.) In this position, all the appearances presented at the base of the brain are visible. Having considered the cranial nerves in the manner described in the preceding section, the structure of the true cerebral masses is to be examined, commencing with that of the cerebellum."

There is a collection of white and cineritious matter, which has been called corpus rhomboideum, dentatum, zig-zag line and kernel of the cerebellum at the union of this organ with the medulla oblongata, and this mass Dr. Spurzheim calls the ganglion of the cerebellum. Vicq d'Azyr thought that this ganglion was only to be found in man, but Gall and our author have shown that it exists in all the mammalia. In man it may be demonstrated running towards the vermiform process (the primary part) of the cerebellum, and it is very conspicuous in birds, although the lateral parts of their cerebella be merely rudimentary.

"This ganglion," says Dr. S. "is not situated in the middle of the cerebellum, but commences where this mass is connected with the medulla oblongata. Vicq d' Azyr commits a capital error in his plate (xxx. fig. 20.) in representing the ganglion of the cerebellum as placed so much externally, so near to the anterior edge of the organ to which it belongs, and so far distant from the medulla oblongata. In forming the cerebellum nature has, in all animals, followed the same plan. Two bundles constantly bring it into connexion with the two sides of the medulla oblongata; these are of variable size; they meet a greater or smaller quantity of gray substance, and proceed, strengthened in proportion to the quantity of this substance encountered; they then regularly compose a primary portion, which in the lowest tribes is smooth superficially, but which as the scale is mounted in, appears furrowed transversely, or divided into lamellæ, and gets complicated by the addition of lateral masses, laminated in like manner. This lamella structure is exposed by a vertical cut through the cerebellum; it bears the name of Arbor vitæ, on account of its supposed resemblance to the thuya, or tree of life.—(Plates.) Although the human cerebellum be very complicated, the elements of a precisely similar formation to that of the lower animals, may without difficulty be traced. One slip from the ganglion forms, with its fellow of the opposite side, the vermiform process, or primary portion, which, by a cut carried through the middle line, may be seen afterwards, dividing commonly into seven principal parts.—(Plates.) These divide into branches, and then again into leafets, differing in each case in number, length, and volume generally.

The other slips or bundles that issue from the ganglion proceed backwards, upwards, downwards, and outwards, and expand into layers, which are disposed horizontally. Those that come from the middle of the ganglion are the longest, the others are successively shorter as they issue nearer to the commencement of the ganglion. (Pl. viii. fig. 1, pl. ix, 1 and 2, and pl. xi. fig. 1, B.)

The peripheral extremities of the bundles thus disposed in lamellæ, are, as well as when they expand and form an uninterruptedly smooth surface, covered with a layer of cineritious substance.

By a section carried vertically through the middle of the ganglion in the direction of its bundles, eleven principal trunks or branches are commonly exposed. The nearer the cut runs to the middle, or posterior edges, of the cerebellar hemispheres, the greater will be the number of branches discovered, as their quantity will be fewer in proportion as it passes nearer to the mesial line of the body. Two branches may frequently be seen intimately united near the base of the ganglion (pl. ix. fig. 2, and pl. xi. fig. 1. B.), and forming, for some little way, a common stalk; but in other cases they proceed quite distinctly from the very beginning. Still greater varieties are to be detected in the interior divisions and subdivisions, which are unimportant, and require no particular mention.

The ganglion of the cerebellum varies considerably in form, and this, not only in different species, but even in different individuals of the same kind of animals. Its appearance also changes according to

the mode in which it is cut; horizontally incised, it has the figure expressed in pl. viii. fig. 2, B. *s.*; obliquely, the form represented in pl. xi. fig. 1, B. *s.*; and, vertically, the contour given in pl. viii. fig. 1, and pl. ix. fig. 1 and 2 *s*. A horizontal cut shows it in its greatest extent.

Although the portions or ramifications of the cerebellum be divided into parallel lamellæ, they do not ultimately lie parallel to each other; each portion thus considered is placed obliquely. Neither are the furrows on the outer surface parallel. (Pl. vi. fig. 1 and 2. Pl. viii. fig. 1, B.) Sœmmerring has remarked, and exposed the error generally committed by anatomists in this matter in their drawings. It is also a mistake to suppose, that the furrows of the cerebellum penetrate deeply into its substance. They only do so in the clefts that mark its principal divisions."—pp. 122—125.

No one can deny to Gall and Spurzheim the merit of having first detected the relations which exist between the annular protuberance and the hemispheres of the cerebellum. M. Tiedemann, however, insists, that it is an error to derive the transverse fibres of the annular protuberance from the cineritious substance covering the leafets of the cerebellum, because, as he says, these transverse fibres are visible before any division into lamellæ can be recognised To which Dr. Spurzheim rejoins, that the reasoning is inconclusive; "since the annular protuberance and cerebellum are developed at the same time;" and that he (Tiedemann) is "himself mistaken in supposing the transverse fibres of the annular protuberance to come in part from the corpus dentatum (ganglion of the cerebellum,) they being altogether derived from the lamellæ of the hemispheres."

Anatomists describe two soft and thin layers, one uniting the upper part of the posterior pyramidal bodies with the lower portion of the vermiform process, the other connecting the cerebellum with the quadrigemina, and called the valve of Vieussens. Reil calls them the superior and inferior medullary veils.

The valve of Vieussens may be distinctly traced through all the four classes of vertebral animals. The inferior veil is conspicuous in the mammalia, though hardly perceptible in birds. After dwelling a good deal on the development of the parts composing the cerebellum, and clearly explaining its structure by numerous references to the plates, Dr. Spurzheim thus concludes the section, and with it this part of the subject.

"To demonstrate the connexion of the cerebellum with a bundle of the restiform body, the medulla oblongata must be pushed to one side, and the auditory nerve and a thin layer interposed between the medulla and the cerebellum, scraped off with the handle of the scalpel. The second bundle of the restiform body, reckoning from the posterior pyramid, will then be seen to plunge into the cerebellum. By entering the point of the knife at the insertion of this bundle, and cutting the cerebellum vertically, so that about two thirds of its substance may be left externally, and the other third remain internally, the communication of the cerebellum with the medulla oblongata; its ganglion, from the entrance of the connecting bundle of the restiform body to about its middle; the ramifications of the white substance; and the peripheral extremities of the various branches universally covered with cineritious matter, constituting the appearance denominated arbor vitæ, will all be exposed. These peculiarities are represented in pl. viii. fig. 1.

To see that the uniting fibres of the cerebellum, composing the annular protuberance or commissure, are distinct from those of the bundle that connects it with the medulla oblongata, the last-named part must be turned aside, and the vocal, glosso-pharyngeal, facial, and auditory nerves removed with the handle of the scalpel; the fibres of union will now be seen gathering themselves from the peripheral parts, and lying over the bundle that springs from the medulla oblongata, and plunges into the cerebellar ganglion. Finally, every cut in the direction of the cerebellar lamellæ exhibits a white surface, as is pictured in pl. viii. fig. 2."

The Brain.—Dr. Spurzheim divides the functions of the brain into two classes, affective and intellectual; and gives to each a particular department. He con-

siders the anterior pyramidal bodies to be the "rudiments of such parts as belong to the intellectual operations; and the other bundles of the medulla oblongata (in man consisting of the olivary and part of the restiform bodies) which run across the annular protuberance to communicate with many of the cerebral masses, as the roots of those which pertain to the affective manifestations."

He commences with the bundles devoted to the intellectual functions, remarking "that the separation into two systems of parts is very evident from the medulla oblongata upwards as far as the pretended optic thalami in man and the mammalia."

"The pyramidal bodies are scarcely to be demonstrated in birds, and still less are they to be seen in reptiles and fishes; in the lowest mammiferous tribes, however, they are abundantly evident. They differ in general size and length, not only in the various species of animals, but also in individuals of the same, especially of the human kind. In man they usually commence about twelve or fifteen lines below the annular protuberance. As they approach this mass, they increase gradually in size, and it is in consequence of this structure that they have obtained their name.

There is a striking peculiarity in the mode of origin of these bundles: the primary fibres of each do not issue from the same side as that on which they lie, but uniting, in the first instance, into two, three, or as many as five little cords, they cross the mesial line of the body, one above another, from below upwards; the bundles of the right pyramidal body, therefore, come from the left side, and those of the left pyramidal body from the right side of the spinal chord. The structure just described is termed the decussation of the pyramidal bodies. It is a constant peculiarity, but it is modified as the number of decussating cords is concerned. When they are numerous, the appearance that results very much resembles plaited straw. In some very rare instances the two pyramidal bodies cross, as entire and undivided masses, from one side to the other."

This decussation of the pyramidal bundles explains why lesions of one side of the head occasion paralysis of the opposite side of the body, but as only a *part* of the brain thus communicates by decussating fibres with the opposite nervous mass, why injuries of the head sometimes affect the same side will be sufficiently obvious.

The true decussation of the pyramidal bodies was first described by Mistichelli in 1709. It was noticed by Petit the year afterwards, and at later periods by Lieutaud, Santorini and Winslow. Before Gall and Spurzheim, however, modern anatomists held divided opinions on the subject. Vicq d'Azyr confounded the simple transverse fibres between the two columns of the spinal chord with the true decussation of the pyramidal bodies, and Prochaska, Barthez, Sabatier, Boyer, Dumas, Bichat, Chaussier, and others, insisted that there was no decussation at all.

"To demonstrate the decussation of the pyramidal bundles, it is sufficient to strip off the pia mater. Let a slight cut be made through the membrane in the median line, without implicating the chords beneath, the edges then separated gently, and the decussation will appear. It will now be easy to reckon the number of bundles, and to take them away in succession with the handle of the scalpel.

The decussation at this place is incontestable, but whether there be any peculiarity in other situations, and whether that of the pyramidal bodies suffices to explain all pathological phenomena, are points that still remain undetermined."—pp. 148—9.

"The pyramidal bodies, as they enter the annular protuberance, are somewhat contracted in their thickness, but they are by no means interrupted in their course. Immediately after having plunged into that mass they separate into several bundles, and are mingled with cineritious substance. Here many new fibres arise and join the others; all advance, some of them dispersed in layers, and some intersecting the bundles of the annular protuberance. The pyramidal bodies are so much increased in their passage, that on emerging from the annular protuberance they compose the anterior and outer two-third parts of the crura or legs.

To see the structure of the annular protuberance distinctly, that is to say, to see the transverse uniting fibres of the

cerebellar hemispheres, the longitudinal fibres communicating with the pyramidal bodies, and crura of the brain, and the cineritious substance intermingled with each, an incision of about a line in depth must be made across the transverse fibres; if the cut be deeper than this, it must not be carried in a straight line, but in the slightly curved direction of the longitudinal fibres; the transverse must now be separated from the longitudinal layers with the scalpel, by pushing those on the outside towards the hemispheres of the cerebellum, and those on the inside towards the mesial line of the annular protuberance. Thus the nerve in which the longitudinal or bundles of the pyramidal bodies are augmented in the annular protuberance, as it were in a true ganglion, will be made evident.—pp. 151, 152.

Having followed the pyramidal bodies across the annular protuberance, Dr. Spurzheim proceeds to ascertain the origin and progress of the bundles which compose the posterior and inner crura of the cerebrum. Besides the pyramidal anatomists speak of the olivary and restiform bodies of the medulla oblongata. Dr. S. has shown that the restiform bodies are the origins of the primary bundles of the cerebellum and of the vocal, glosso-pharyngeal, facial, and trigeminal nerves. The fibres and the fasciculi of the olivary bodies, mounting behind the ganglion of the pyramidal bundles in the annular protuberance, join and complete the cerebral crura.

The olivary bodies are true ganglions, and present the general forms and appearances which are observed in the ganglion or dentated body of the cerebellum. The second, or posterior and interior portion of the crura cerebri is intimately connected with the quadrigeminal bodies, and contains with the former, the roots or primary bundles of the hemispheres of the brain. It is evident, however, that they cannot form such a mass as the brain, without being much increased in volume, and this augmentation is effected at the upper extremity of the anterior portion, where the optic nerve winds over the outer part of the striated bodies. Fibres of unequal length expanding into layers, and covered on their peripheral extremities with a cineritious substance, next advance, and form the inferior, anterior, and external convolutions of the anterior and middle cerebral lobes. To show that the lower and interior convolutions of the cerebrum are formed by the anterior and outer crural bundles, the middle lobe must be removed, which as it is separated from the anterior lobe by the fissure of Sylvius, may easily be effected. Besides this fissure thus exposed, certain short convolutions, which are hidden between the middle lobe and superior cerebral parts, will now be exposed, and the bundles which issue from under the optic nerve, will be seen to belong to the anterior part of the posterior and to the middle lobes. If the entire outer part of the striated bodies be removed, the manner in which the convolutions which are placed along the middle region of the hemispheres arise from the bundles continuing the pyramidal bodies, will be seen. The pyramidal bodies and their ganglions in the annular protuberance, the anterior and outer portions of the cerebral crura, and the convolutions in which their bundles terminate, are always developed in a direct ratio to each other.

The posterior and inner bundles of the crura cerebri plunge into a thick, massy, and firm ganglion, which has been regarded as the origin of the optic nerve, and thence called its thalamus. The two masses called cerebral crura may be separated by a blowpipe or a stream of water. Before Gall and Spurzheim no one had distinguished the true optic ganglia from what are called the thalami, which are masses belonging to the brain. "The masses styled optic thalami and striated bodies are true ganglions, in which the primary bundles of the brain are increased

in their progress to completion in the convolutions of the brain; for the radiated diverging fasciculi expand into layers, and being covered with cineritious substance in their extremities compose the convolutions. The faultiness of examining the structure of the brain will now be in some degree appreciated. Instead of tracing the masses from their rudimentary state upwards to completion, anatomists have been in the habit of commencing the dissection by mutilating the parts when already arrived at perfection. By scraping the parts, Vieussens followed, and has given a rude drawing of the nervous bundles in connexion with the pyramidal bodies. These fasciculi, however, he derives from his oval centre; he was altogether ignorant of their destination—the formation of the convolutions."

The possibility of unfolding the convolutions, appears to have occurred to Gall on reading the Observat. Med. of Nich. Tulp. (Lib. I. Cap. XXIV.,) and observing the appearances which are there related in several hydrocephalic heads.* One case in particular giving a new impulse to his inquiries, he and our author attempted to imitate artificially the state of the brain in hydrocephalus. Having stripped off the pia mater, they insinuated their fingers into the great cavities, and by pressing more particularly against the posterior walls, they found, after a slight resistance at the commencement, that the convolutions separated along the interior, into two parts. From this rude experiment it may be conceived, how the unremitting pressure of the water in hydrocephalus may unfold the hemispheres into a membranous sheet, without destroying the nervous fibres. These authors have never pretended to unfold the whole of the brain, as some have imagined, merely separating the layers which compose the convolutions, which we state, because we have no space to follow them through this interesting inquiry. Indeed we have already far exceeded our limits, and although we leave much untouched, must hasten to a conclusion by observing, that Dr. Spurzheim next speaks of the commissures, or fibres of union, then of the communications of the nervous apparatuses, and, lastly, of the anatomico-physiological relations of the nervous system.

The work does infinite credit to the author, and will be read and studied by all who desire to cultivate an acquaintance with the human and comparative anatomy of the nervous system, or to know the true structure of the brain. Dr. Spurzheim has made zootomy unfold the intricacies of the human machine, and those who have no opportunity of consulting the latter, may at all events instruct themselves, by practising the former, and we can assure them, that they will find in the present volume a clear and philosophical exposition of both. It contains eleven beautifully-executed plates, each embracing several views, and without these, as we have already stated, the most extended analysis must needs be imperfect, if not prolix, tedious, and unintelligible.

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* Tulp's patient, a child five years of age, died of hydrocephalus; Sectio "ostendit in capite suo detineri, quinque aquæ libras; quibus effusis, fuère omnia adeó vacua, ac inania; ut plerique medicorum presentium, sed præpropere judicaverint, hic conspici, caput sine cerebro. At oculi acie, illuc penitus directâ, vidimus satis perspicuè, cerebrum non defuisse sed *amissâ* figura globosâ induisse formam convexi fornicis; et ab exuberante aquâ, sequacem ipsius medullam adeo fuisse distentam; ut instar ali cujus crassioris membranæ, adhæresceret undique, arcuatæ, dissolutorum ossium, circumferentiæ. Pueri pater adseverabat, integra mentis munia."

To the Editor of THE LANCET.

SIR,—The letter of Mr. Johnson in your 137th number, is an excellent exposition of the despotism and folly of the ruling powers at the College of Surgeons; while it is additional evidence (if such were necessary) that a change of men and measures in that institution is absolutely necessary.

I am, however, surprised that Mr. Johnson was not aware, previous to his examination, that a difference of opinion on any one point would effectually insure his rejection. The examinations, as conducted by the *ten wise* men, are not generally limited to an inquiry how far the candidate is acquainted with his profession, but to ascertain whether his opinions are "sound" or heretical.

In such a case, the more vague and undefined the questions are, the less likely is the candidate to triumph over his examination.

This system has been pursued for many years; but, like other corruptions in that institution, will soon drag its authors before an enlightened public, to receive that judgment and punishment attendant on their iniquitous career.

Mr. Johnson has the gratification of knowing that he is not singular, in having offended the ruling powers by an inflexible adherence to opinions advanced by men of talent and integrity; notwithstanding the pains and penalties attendant on such an offence.

May 16. A CONSTANT READER.

To the Editor of THE LANCET.

SIR,—Should the enclosed case be of any use, I beg you will have the goodness to give it a place in THE LANCET.

J. TWEDDALE.

87, St. Martin's-Lane, May 17.

I was sent for yesterday afternoon, between two and three o'clock, to the house of Mr. J. of Bow-street, Covent Garden, and on my arrival learnt that the nursery maid had, half an hour before, swallowed about half an ounce of laudanum in a fit of jealousy. I found her in a state of stupor, but sensible, and complaining of pain and giddiness in the head. The phial I found properly marked —"Laudanum, Poison." I immediately dissolved two drachms of purified sulphate of zinc in warm water, the half of which I administered directly, giving after it a large tumbler of the infusion of mustard almost every minute. In about five minutes afterwards, the remaining portion of the zinc was given, but she only vomited twice, though every means had been used to excite vomiting by tickling the fauces and nostrils with a feather dipped in the spirit of ammonia; at this time Mr. WEISS, sen., of the Strand, arrived with his stomach pump, whom I had sent for, as I was fearful I should not succeed in clearing the stomach by means of emetics, and in my opinion I should certainly have lost my patient had I trusted to them alone, and recollecting that I had lately seen a lady lost from taking laudanum, where the stomach pump had been used too late—two hours having elapsed, I had determined in the next case I met with not to delay its use. I therefore introduced the pipe into the stomach, and kept it fixed, whilst Mr. Weiss, junr., worked the pump and emptied the stomach of its contents. We continued to inject and draw off large quantities of warm water, until it ceased to have any smell of laudanum. At one o'clock the patient had made a hearty dinner on roast pork, greens, and potatoes; but this solid food passed easily through the tube and proved no obstacle in clearing the stomach, an advantage which in my opinion is entirely owing to Mr. Weiss's instrument being made to act without a valve, and which clearly shows its superiority over any other instrument of a different construction, because the solid contents of the stomach might absorb and retain as much of the laudanum as would be incompatible with life, in spite of mere ablution by the water injected and drawn off by the pump, whose valves will not permit solid ingesta to pass. After this she was directed to be kept constantly walking, and her head and face to be wetted with cold water and vinegar. Some aperient medicine was given. At 10 (p. m.) she has been exceedingly drowsy, ever since, and if left alone for a few minutes, her breathing becomes sonorous, and she falls into a sound sleep, in which she wishes to be allowed to indulge; the pupils of the eye are contracted, pulse small and frequent, bowels have been opened.

17th. The patient was kept walking until two o'clock this morning, when she was put to bed, the head and face have been kept constantly wet with cold water and vinegar. The sonorous breathing having returned after she had gone to bed, cold affusion over the head, face and neck was had recourse to, which had the effect of recovering her, and she soon after fell into a calm sleep; she only complains of pain in her head. Skin is hot; face flushed; pulse 80. Bowels have been again moved plentifully, and it is probable she will to-morrow be able to resume her usual duties.

HOSPITAL REPORTS.

GUY'S HOSPITAL.

Case of Phymosis, succeeded by Phagedenic Ulceration.

G. Bell, ætat. 19, of spare habit and pale complexion, was admitted into Samaritan Ward, on 22d of March, under the care of Mr. Morgan. He had phymosis of six days' standing; the penis was very much swollen and of a dark red colour, and at one part was a dark gangrenous spot. The patient stated that he had a discharge for several days before the phymosis came on, but it was not evident from his statement whether it was gonorrhœal or proceeded from ulcers. The discharge ensued three days after connexion with a woman living near the London Docks.*

Mr. Morgan slit up the prepuce by means of a bistoury, and it was now seen that the glans was on the verge of sloughing.

There was considerable constitutional derangement attendant on this state of parts; the pulse was quick; tongue furred; the patient was restless, and complained of thirst.

He was ordered to take some pills of colocynth and calomel immediately, and the following draught every four hours:

Solution of acetate of ammonia, ½ ounce,
Tincture of henbane, 20 drops,
Camphor mixture, one ounce.

25. The integuments of the penis, to a considerable extent, have now assumed a dark gangrenous appearance. Pulse quick, but feeble; bowels freely open.

Calomel, one grain and a half,
Opium, one grain,
to be taken three times a day, with the following draught:
Sulphate of quinine, three grains,
Infusion of roses, one ounce and a half.

The dilute nitric acid lotion to be applied to the part by means of lint, and over this a bread poultice to be applied.

29. The parts about the wound have put on a more healthy appearance, losing their dark gangrenous character, the surrounding inflammation being also much lessened. The surface of the sore is covered with fibrin. The mouth is not yet affected by the mercury.

April 1. The sore looks clean, but it is irritable and has a disposition to increase. Pulse 104; tongue furred in the centre, clean at the edges; bowels open, and sleep natural. He now takes twelve ounces of wine daily.

4. Although the sore has apparently a healthy surface, yet it appears to have extended. The nitric acid lotion was discontinued to-day, and opiate ointment, spread on lint, applied to the sore; over this a poultice is applied.

6. The ulcer is of an ash colour, its disposition to increase continuing. The opiate dressings occasioned so much pain that it was necessary to omit them, and again apply the nitric acid lotion. Pulse quick and irritable. The mouth has been slightly sore two days. He now takes

Calomel, one grain,
Opium, two grains, three times a-day.

8. In consequence of the phagedenic disposition of the ulcer, Mr. Morgan applied nitrate of silver freely to the lower the part. The patient is restless, and complains of pain in the part.

11. The edges of the sore have a more favourable appearance; there is a small slough on the side of the right corpus spongiosum, and some urine passes this way; Mr. Morgan applied the strong nitric acid to the slough this morning. Continue the medicines.

14. The mouth has now been sore for several days, and Mr. Morgan remarked to-day, that he thought the ulcer had assumed a more unhealthy aspect since this occurrence. He directed the calomel to be omitted, and determined on giving full trial to the stimulating plan of treatment, with a view of checking the phagedenic disposition of the ulcer. He directed the following medicines:

Subcarbonate of ammonia, eight grains,
Musk mixture, (p.i.) one ounce and a half,
Laudanum, forty drops, to be taken three times a day.
Sulphate of quinine, three grains,
Capsicum, four grains, to be taken three times a day.

18. The patient has certainly benefited under the present plan of treatment. The edges of the sore are looking healthy, their phagedenic disposition appears to be checked.

24. Going on well; the parts now beginning to heal.

* We mention this circumstance so minutely, because we shall have occasion at some future time to show, that a specific venereal sore, of the most destructive and unmanageable nature, is generated in a particular district of London. The disease which this patient had was not of this character.

26. Report still favourable; the quantity of stimulus is now diminished.

May 1. The patient will shortly leave the Hospital, the parts having nearly healed up.

Abscess near the Anus.

The patient is a middle-aged woman, and has had for some time a purulent discharge from the rectum. At first she had considerable pain (we suppose during the formation of matter,) but of late has been much easier. On examining the parts around the anus, there was no very distinct evidence of the immediate part in which the matter had formed on the left side; however, there was a slight induration to be felt. Mr. Key made an opening at this part with a curved-pointed bistoury, and matter followed the incision. He then endeavoured, with a probe, to find the opening into the gut, through which the matter passed, but failed. On the following day attempts were made, but still not succeeding, Mr. Key forced an opening into the intestine with a bistoury, and drawing it down with his finger in the rectum, divided the gut in the usual manner.

Mr. Key observed on this case, that he had seen one of a similar nature lately, in which a *very eminent* surgeon had overlooked the true cause and seat of the disease, and had treated the case as disease of the rectum alone.

These cases are termed in the *pure* language of the surgical schools, "*blind internal fistulæ.*" An abscess forms by the side of the anus, and instead of making its way externally, bursts into the rectum. The formation of matter is attended with pain and swelling of the parts, and much relief is obtained when the matter makes its escape. In some cases, after the abscess has burst, the external parts around the anus have suffered so little change, the matter probably being high up, that it is difficult to detect the place in which the secretion of pus is still going on. In general, however, there is a degree of induration to be felt, and if, on pressing at this point, matter flow from the rectum, we have an additional confirmation.

The following cases were admitted under the care of Mr. Morgan on Wednesday, May 3d :—

Males — Hydrocele (2); superficial fungus of the testicle; sloughy ulceration of the throat; stricture of the urethra, with extravasation of urine; injury to the elbow joint; disease of the bladder; inflammation of the leg; disease of the hip; inflammation of the arm; stone in the bladder.

Females—Two cases of irritable breast; noli me tangere; glaucoma; abscess on the back; injury to the knee; disease of the hip.

Superficial Fungus of the Testicle.

The disease in this case occurred in a middle-aged man, and presented its usual appearances. The patient stated that the testicle had been hardened and diseased upwards of two years, and that about seven weeks since the integuments of the scrotum ulcerated at a small spot, matter issued out, and shortly after granulations began to sprout from the part. He attributed the disease to a blow on the scrotum. On examination it was found that the principal part of the testicle was involved in the disease, and on this account Mr. Morgan recommended the patient to have the operation of castration performed. The patient assented to the proposal, and the testicle was removed on Tuesday, May 9th.

The fungous excrescence was found to originate from the glandular substance of the testicle; there was an aperture through the coats at which the fungus projected. The portion of testicle which remained in the scrotum was so much altered in its structure, that it was only a slight portion at the back part in which the tubuli-seminiferi could be detected. *The epidydimis and chord were perfectly sound.*

Sloughy Ulceration of the Throat.

The patient in this case is a man of spare habit, about 42 years of age. He says that he has had sore throat for two years; that at one period it nearly healed; but shortly after became ulcerated again.

On looking back into the mouth we find both tonsils destroyed, and also the pillars of the fauces; the principal seat of the disease now is the soft palate, a considerable portion of this also is gone, so that the opening into the posterior nares is seen. There is a yellowish slough covering the parts, and they are surrounded by a dark coloured inflammation of considerable extent.

If the testimony of the patient can be at all relied upon, there is no reason for considering the ulceration of the throat venereal, although its appearance would, in some measure lead to such an opinion.

The man says that about twenty-three years since he had a small sore on the

penis, which soon healed; but he does not know whether he took mercury for its cure. He declares that subsequent to this he has not had any venereal affection.

The most important feature, however, in the history of this case, and one which may serve to explain the appearance of the parts is, that the patient has been "drugged" with mercury for the cure of the disease in the throat, under the supposition of its being venereal.

When we consider that in addition to the debilitating constitutional effects arising from what is termed "a course of mercury," that this medicine also has a peculiar local effect on all the parts within the mouth, hurrying on their secretions, and inducing an unusual flow of blood, we can readily conceive that ulceration of the throat, arising from any common cause, would, from a combination of these circumstances, under the influence of mercury, speedily assume a phagedenic or sloughing character. Cases of this kind almost daily present themselves to our notice, in which not only is there extensive destruction of the soft parts, but the bones also, from their contiguity, having participated in the inflammation, have become diseased, and exfoliation has taken place. In many instances we have known these cases adduced as evidences of the specific effect of mercury in producing disease of the bone; it has been shown, however, that the fact can be explained by the common laws of disease.

The treatment adopted in the case under consideration, has been as follows:

A blister to the throat; a purgative powder composed of scammony and calomel on the first day of admission, and the frequent use of the nitric-acid gargle, which is thus prepared:

Dilute nitric acid, 1 *drachm*;
Water 1 *pint, mix.*

Subcarbonate of Ammonia, 6 *grains*;
Decoction of Bark, 1 *ounce and a half*;
Tincture of ditto, 1 *drachm*; *to be taken three times a day.*

The ulcers to be touched with a solution of nitrate of silver in the proportion of half a drachm to three ounces of water.

Under this plan of treatment the parts have assumed a more healthy appearance, and have apparently, in some places, a disposition to heal.

Stricture of the Urethra with Extravasation of Urine.

J. Wallis, was admitted into Luke's Ward, on account of stricture of the urethra. The patient stated, that for several years he had passed his urine in a small interrupted stream; but that for several days before his admission the difficulty had much increased, and he had also felt much pain and irritation about the urethra. There was some degree of swelling perceptible in the perinæum.

When the patient was put to bed, Mr. Morgan attempted to introduce a sound; he found a firm stricture at the membranous portion of the urethra, and the instrument readily passed from this to a great depth down; but Mr. Morgan being convinced that it had not entered the bladder passed his finger into the rectum, when he found that the instrument had taken the course of a false passage by the side of the gut. As there were no urgent symptoms, Mr. Morgan did not think it necessary to make any further attempts to introduce the sound, and it should be observed, that in the first effort no undue force was exerted, the instrument passing with comparative ease into the false passage.

In the evening of the same day, Mr. Morgan's attention was directed to the patient, in consequence of his being attacked with rigors succeeded by fever. The swelling in the perinæum had considerably increased, the scrotum was also much swollen, and the integuments of a dark red colour.

It was evident that these symptoms were to be attributed to extravasation of urine. Mr. Morgan considers that the infiltration had probably begun in the morning, owing to the usual cause—ulceration of the urethra behind the stricture, and that passing the instrument increased the breach, so as to render extravasation more rapid. He now passed, without much difficulty, a metallic catheter into the bladder, and drew off a quantity of high coloured offensive urine. The scrotum and perinæum were freely scarified. The parts were ordered to be constantly fomented, and the following draught was prescribed to be taken every four hours:

Laudanum, 20 *drops*;
Solution of acetate of ammonia, half an ounce;
Camphor mixture, 1 *ounce.*

May 4. The patient expresses himself much relieved, and has passed a tolerably comfortable night. Tongue furred, and complains of thirst; pulse, 90; bowels, open this morning. The scrotum and perinæum are less swollen. The fomentations are continued to these parts, and Mr. Morgan directed a dose of common saline mixture, with the addition of two drachms of sulphate of magnesia, to be taken every four hours.

5. Mr. Morgan removed the silver catheter, and substituted what is termed the "elastic gum catheter." Mr. M. remarked, that on several occasions he had known the metallic catheter produce ulceration of the urethra. The state of the patient is very favourable; pulse, 84; tongue moist, and bowels open. The swelling of the scrotum, however, does not subside so much as expected. Continue the warm fomentations.

7. The patient is going on favourably. The scrotum is now of its usual size.

13. In consequence of the catheter having slipped from the bladder during the night, a farther extravasation of urine has taken place, and Mr. Morgan found it necessary to scarify the scrotum. Twenty leeches to be applied to the perinæum.

Subsequent to this report the patient has done well.

The case of *Injury to the Elbow-joint* offers nothing especially worthy of remark. The patient had a fall upon the arm about two months ago, which gave rise to swelling and tenderness of the parts about the joint. The repeated application of leeches has proved of great service, and the parts have now assumed their natural appearance.

The *Disease of the Bladder* we shall speak of on a future occasion. The remainder of the male cases, with the exception of *Stone in the Bladder*, are uninteresting. A poor boy, about four years of age, is the subject of this painful disease; the symptoms are very urgent, and the constitution is much debilitated, from the continued irritation kept up. He has experienced much relief since his admission, by the exhibition of small doses of soda three times a day, with occasional purgatives of rhubarb and calomel. Mr. Morgan has not yet sounded him, the symptoms, however, are so unequivocal, that little doubt remains of a calculus being in the bladder. Notwithstanding the unfavourable state of the patient's health, and also of the bladder, which is probably ulcerated from the appearance of the urine, Mr. Morgan considers that it will be justifiable to operate shortly, as by this means the exciting cause of the local and constitutional disturbance will be removed.

Irritable Tumour of the Breast.

E. M., a healthy looking girl, of fair complexion, and about 18 years of age, has had disease of the right breast four months. On attempting to examine the breast, the nature of the disease is rendered apparent by the exquisite sensibility of the part, the patient shrinking from the slightest touch. She complains of pain extending from the breast to the arm of the affected side. The patient's general health is good; her bowels are habitually costive; her menstrual evacuations are regular. The following plan has been pursued in this case:

Pill of aloes with myrrh, 5 *grains*;
Blue pill, 2 *grains*, to be taken every night.
Sulphate of magnesia, 1 *drachm*;
Infusion of roses, 1 *ounce and a half*, to be taken twice a day.

Leeches have also been applied to the breast.

The other patient affected with a similar disease of the breast to that which we have described above, is a young girl of the age of 17; she was attacked, soon after her admission into the Hospital, with peritoneal inflammation, from which she is now becoming convalescent.

The case of *Noli me tangere* we shall speak of, when the present plan of treatment shall have had a fair trial.

The case of *Glaucoma* occured in a female 70 years of age. She has been for many years deprived of the power of vision in the eye, but of late it has been very painful, and its vascularity much increased. Mr. Morgan considers that it is an accidental attack of inflammation in the tunics, unconnected with the deep seated disease of the eye. Leeches and blisters have been applied, and the temple cupped. A grain of calomel, and half a grain of calomel have been given night and morning.

The *Abscess on the Back* is extensive, and there is probably disease of the lower portion of the scapula, over which part the abscess extends.

The *Injury to the Knee* is of a trivial nature, and has yielded to the application of leeches, cold lotion, rest, and the exhibition of purgatives.

The *Disease in the Hip* is of long standing; the patient is a delicate looking girl, about eight years of age. There is already considerable shortening of the limb on the affected side.

The patients admitted by Mr. Morgan, under the head of accidents, were few in number, and the cases mostly unimportant. There was a case of strangulated femoral hernia occurring in a middle-aged man; it was reduced by the taxis, after the use of the warm bath.

Operations.

Amputation. On Tuesday, May 9th, Mr. Key amputated the leg of a man below the knee, in consequence of disease of the ancle joint. Instead of the usual circular incision through the integuments, two semicircular cuts were made, the convexities of which extended in a parallel manner forwards, and their terminations met at the upper and lower surfaces of the limb; so that, in fact, two lateral flaps of integuments were formed or it was as Mr. Key describes it, "the circular incision with the upper and lower part cut out." Mr. Key has "introduced this variation," this *experimentum cruris*, with a view of preventing the puckering of the integument, at the upper and lower part of the stump, which usually occurs in the circular flap. The two flaps being dissected back, the muscles were divided, and the bone sawed through in the usual manner. The patient remained on the table for a great length of time, in consequence of the difficulty experienced in securing the vessels, more especially the posterior tibial, which had retracted in an unusual degree.

Mr. Key also removed a small exostosis from the upper and back part of the humerus. An incision was made through the soft parts over the tumour, and the chain-saw then employed to remove it. On the same day Mr. Morgan performed the operation of castration.

On Saturday, May 13, Mr. B. Cooper extirpated the breast of a female affected with cancerous disease. The particulars of this case will be found in the notice of Mr. Cooper's admissions on 19th of April.

ST. THOMAS'S HOSPITAL.

Cases of Epilepsy, in which very large doses of the Sulphate of Zinc were exhibited.

In the three following cases of epilepsy which are in the hospital, under the care of Dr. Elliotson, the sulphate of zinc has been administered in scruple doses, without producing any sensible effect. It will be observed that the dose was gradually and cautiously increased, from one grain upwards. It will also be seen that in one case, when the dose was increased to 24 grains, it produced pains in the stomach and bowels, which subsided on reducing the quantity to a scruple.

D. F., a healthy looking boy, 11 years of age, admitted into Abraham's Ward, October 6. Has had Epileptic fits, six months, sometimes has four or five fits in the course of a-day, at other times free from an attack for several days. The first fit occurred after carrying a heavy load on the head.

On the 7th of February, Dr. Elliotson commenced the exhibition of the sulphate of zinc; one grain to be taken three times a day; 10th, 2 grains; 14th, 3 grains; 17th, 4 grains; 21st, 5 grains; 24th, 6 grains; 28th, 7 grains; 31st, 8 grains; March 4, dose increased to 9 grains three times a-day; 7th, 10 grains; 11th, 11 grains; 14th, 12 grains; 18th, 13 grains; 28th, 14 grains; April 5th, 15 grains; 7th, 16 grains; 11th, 18 grains; 13th, 18 grains; 18th, 19 grains; 21st, one scruple.

Finding this medicine did not produce any effect, Dr. Elliotson thought proper to discontinue its use. On one occasion, the patient was sick from taking the pills before breakfast; but at no other time did the medicine produce any apparent effect.

The second case of epilepsy is also in a boy of about eleven years of age. He was admitted into the hospital on the 27th of October, and had been labouring under the disease twelve months.

On the 12th of December, he commenced taking the sulphate of zinc, and increased the doses in a similar manner to the case first related.

On the 7th of February, he was taking eighteen grains, three times a-day, and it was shortly after discontinued, as Dr. Elliotson considered he had given a fair trial to the medicine.

He has since taken carbonate of iron, and is now (April 29) taking the ammoniated copper.*

The third case of epilepsy, in which the sulphate of zinc had been administered, is to a young woman, about 27 years of age. She was admitted into the Hospital on the 29th of December; she had laboured under the disease upwards of ten years, and had many fits during the day.

On the 24th of January she commenced taking one grain of the sulphate of zinc three times a day, and the dose was gradually increased to the 18th of April,

* The Doctor seems to be determined on establishing "*a metallic currency.*" Does he ever *give*, or does he only *take* the precious metal? We know the Doctor loves a joke, for one of his patients, who was taking carbonate of iron, having complained that he was very costive, the Doctor remarked, "it is not surprising, for *your bowels are bound with iron.*"

when we find her taking *twenty-four grains* of the salt, three times a-day. She now complained of some pain in the stomach and bowels, but upon returning to the scruple doses, which she had for some time previously taken, the pain ceased. At the period of this report, (April 29,) she continues to take the scruple doses.

The cases admitted on Thursday, April 13th, under the care of Mr. Tyrrell, were as follow:—

Males—Disease of the palate; chronic affection of the elbow joint; lipoma, or superficial fungus of the testicle; three cases of ulcer of the leg; amaurosis; inflammation of the knee joint, arising from injury.

Females—Scrofulous ulceration of the shoulder and arm; extensive abscess in the neck; ulcer of the knee and arm; ulceration of the scalp; amaurosis.

Superficial Fungus of the Testicle, with constitutional derangement.

J. Young, ætat. 40, pale and emaciated in appearance, admitted on account of disease of the right testis, and ulcers of the leg. There is a large fungous growth of granulations, on the right side of the scrotum, springing from the body of the testicle, and apparently firmly girt by the surrounding integuments. The disease is of three months standing. The patient gives the ordinary description of its progress, stating that the testicle first became swollen, then a small soft spot appeared on the integuments, this soon passed into an ulcer, with purulent discharge, and lastly granulations shot out.

We have remarked, that he was pale and emaciated, and it appears upon inquiry, that he has been so much out of health during the last eighteen months, that he has been prevented from pursuing his customary avocation.

He says, that about eighteen months ago, he had a small sore on the penis, for which he continued to take mercurial medicines one month, although the sore healed in the course of a fortnight. The mouth became very tender, and whilst he was thus under the influence of mercury, he got wet, and was otherwise exposed to cold. He was now attacked with sore throat, for which blisters were applied. The throat and mouth remained sore for a long time, and at the end of four months, a portion of the upper jaw exfoliated; soon after this, swellings appeared on the shin, these, however, dispersed.

About eight months ago, he found swellings of the joint of the great toe, and also of the knuckles; these in a short time subsided. Four months after, a swelling appeared on the shin, which bursted and discharged matter, and has since continued in a state of ulceration. There is considerable periosteal thickening on the left tibia.

The treatment hitherto employed has been to apply poultices of linseed-meal, and lint dipped in black-wash, to the disease of the testicle; calomel, 1 grain, and opium ½ grain, night and morning, and *a wine-glassful of the decoction of sarsaparilla, three times a day.** Mr. Tyrrell intends cutting off the fungus and paring the edges of the integuments, a mode of practice which is usually successful in these cases.

The case of ulcer of the leg, and inflammation of the knee from injury, do not present any thing worthy of remark; the case of amaurosis is under a particular plan of treatment. We shall report this case at length.

Amongst the female patients admitted this week, there were two cases which we deem worthy of attention. Extensive abscess of the neck, and of amaurosis. The first occurred in a female about 30 years of age, the abscess was very large, extending from the angle of the jaw to the clavicle, and at the upper part was a large slough. The treatment employed in this case was to make openings in a depending part of the abscess; to encourage the separation of the slough by means of poultices and fomentations, together with the application of the dilute nitric-acid lotion. Calomel and opium were also exhibited.

In a few days the slough separated, and the parts began to granulate. Mr. Tyrrell now directed strips of adhesive plaster to be put on. The parts are healing fast. We shall reserve the report of the female case of amaurosis, until we see the effect of the present plan of treatment.

The following cases were admitted into the hospital, on Thursday, April 20, under the care of Mr. Travers. Abscess

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* We need not say that this is a very inefficient mode, but it is the customary manner in which sarsaparilla is exhibited at this hospital. By the bye, which of Mr. Whitfield's friends had the *contract* for sarsaparilla last year? It only costs the hospital a "few cool hundreds," for this drug. "Some civet—sweet apothecary."

of the arm; permanent stricture; ulcer of the leg, connected with periostoal disease; chronic disease of the knee joint; two cases of hydrocele; enlargement of the inguinal glands; abscess on the dorsum of the foot, superficial, and following injury; two cases of suppurating bursa at the knee joint.

None of these cases present any thing particularly worthy of notice. Both the hydroceles have been tapped and injected, the one with a solution of sulphat of zinc, and the other with port wine and water. The solution usually employed at this hospital, is in the proportion of one drachm of the salt to a pint of water, and the vinous injection is made with two thirds of port wine, and one third of water.

Elephantiasis.

L. S., a married woman of dark complexion, about 33 years of age, was admitted into St. Thomas's Hospital, on the 3rd of February, 1826, on account or a disease of the skin. She came in under the care of Mr. Travers, but was subsequently transferred to Dr. Williams.

The patient is a native of Portugal, but has resided in England during the last fifteen years. She says, that five years ago, and immediately after her confinement in child-bed, she felt an itching, heat and dryness about the skin of both arms, which occasioned her to rub them. After a lapse of some time, as she expresses herself, "lumps appeared in the skin," she now took mercury, until her mouth and gums became very sore, and in the space of a few weeks, she found that a similar disease to that which affected the skin of the arms had now attacked the face. She placed herself under the care of Mr. Wilkinson, who repeatedly bled her, in conjunction with other means.

From the patient's imperfect manner of expressing herself we were not able to glean any further particulars with respect to the origin of the disease, or what measures besides the venesection were employed before her admission into the hospital.

Present Symptoms.—The disease is confined to the arms and face; the skin of these parts is of a brown colour, and beset with tubercles of different sizes. On the back of the hand they are of the size of a French-bean, shining, and of a livid colour. Both arms are almost covered with scars, the whiteness of the skin at these parts forming a striking contrast to the discoloured state of the surrounding parts. The patient accounts for these scars by observing, that as the tubercles appeared at different times, they were opened. The skin on the face is much thickened and rugous, and the countenance altogether has a swollen distorted appearance. The eye-lashes and eyebrows fell off more than twelvemonths ago, and the hair of the scalp also has come off, but this she attributes to an attack of fever, which lasted several weeks. The hair in the axilla remains. The lips, on the inner side are in a state of ulceration, and bleed, whilst on the outer side they are covered with a yellowish crust or scab, and there are some few parts of the face which have also this incrustation.*

There are no tubercles on any part of the body, the legs are also free from them, the skin is discoloured, and has a tense feel, the legs are evidently much swollen. She has not menstruated for two years, and she says, that she is much worse, about once a month, having then great pain, and increased swelling of the legs. The ends of all the toes on the right foot are in a state of ulceration, the disease commencing under and destroying the nail.

The poor woman's general health is not much disturbed; we have seen her from time to time, during the many months she has been in the hospital, and she appears to us much the same as when admitted.

With respect to the treatment employed in this case, we believe it has consisted principally in the administration of *spruce-beer*. The patient is allowed a generous diet, such as mutton-chops and port-wine, daily.

The accidents admitted during Mr. Travers's week, were for the most part unimportant.

There was a case of dislocation of the humeral extremity of the radius, forwards, occurring in a man, from a fall upon the hand. The diagnostic symptoms of this accident were well marked. The reduction was effected without much difficulty, by turning the hand supine, bending the fore-arm, and then making extension from the hand.

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* There is a plate in Dr. Willan's work, representing a woman with this disease, elephantiasis. It was sketched from a patient of Mr. Lawrence's, and the particulars of this case are related in the Medico-Chirurgical Transactions for 1815. It very closely resembles the appearance of the poor woman whose case we are now relating.

Mr. Green admitted the following cases into the Hospital on Thursday, April 27th:

Males—Inflammation of the testicle; injury to the loins; stricture of the urethra; ophthalmia (2); amaurosis; hypopion; chronic affection of the knee-joint.

Females—Four cases of ulcer on the leg; disease of the hip; hare lip; tumour of the upper eye-lid; irritable tumour of the breast; encysted tumour on the nates; fungoid disease of the orbit.

The *inflammation of the testicle* was the result of injury to the part, and readily yielded to the application of leeches, with the exhibition of purgatives and observance of the recumbent posture.

The *injury to the loins* was of a trivial nature, and was relieved by cupping and purging.

Of the two cases of ophthalmia, one was of an acute kind, the particulars of which we subjoin; the other case was of a less severe nature; the patient, on account of improper conduct, was dismissed from the Hospital a few days after admission.

Case of Ophthalmia.

J. Twitchett, ætat. 32, of spare habit and pale complexion was admitted on account of inflammation of the right eye.

The patient is a glass cutter; he says that the eye has been inflamed about three weeks, but within a few days has become much worse.

The white of the eye is covered with a general redness, and on minute examination numerous vessels may be seen passing in a straight direction to the edge of the cornea, whilst others, and fewer in number, are pursuing a tortuous course. The cornea has a dull, hazy appearance, so that the pupillary margin of the iris cannot be distinctly seen.

The patient's power of vision is much diminished, there is an intolerance of light, and on exposing the eye an effusion of tears occurs. He complains of throbbing pain in the eye, and he has some constitutional febrile excitement.

28th. The following plan of treatment was adopted:—

A purgative powder to be administered immediately, and ten ounces of blood to be abstracted from the temples by means of cupping. A shade to be worn over the eyes, and to wash them with a tepid fomentation of poppies, several times in the day. The following pill was also prescribed to be taken night and morning.

Calomel, one grain,
Opium, a quarter of a grain.

May 1st. The patient found much relief from the cupping, he has less pain, and the vascularity of the eye is somewhat diminished. Mr. Green directed the cupping to be repeated, and to continue the pills.

Under this plan of treatment (the mouth becoming slightly affected with the mercury) the symptoms gradually yielded. It would be tedious and uninteresting to notice the daily changes which took place in the progress towards cure. On visiting the patient on the 10th, we found that all the preternatural vascularity was gone, but still he complained of dulness of vision; the cornea, however, had become nearly of its usual brightness.

The cases of amaurosis and hypopion * we shall speak of on a future occasion; the chronic affection of the knee joint is but of slight importance.

The female cases of *ulcers on the leg* and the *disease* of the hip are but of slight importance.

The *hare lip* is double, and occurs in a child about two years of age. Mr. Green operated on one side a few days after the child's admission.

Tumour of the upper Eye-lid.

The patient in this case is a healthy-looking child, about seven years of age. When admitted there was a tumour on the upper eye-lid of the right, which completely obstructed vision. It had a firm, but somewhat elastic feel, and was not very painful upon pressure. The swelling first made its appearance about three months before the patient's admission, and went on gradually increasing until by its magnitude (as stated above) sight was impeded by the hindrance of opening the eye. There was some doubt as to the nature of this tumour; and its rapid growth was considered

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* We find this case noted by Mr. Green in the ward book as "*inflammation of the tunica conjunctiva.*" This we suppose is intended for the information of the surgical pupils. It is on a par with his *illustrious* colleague Dr. Williams's notes of cases, which run thus, "*Ægrotat per menses* ij"—*Ægrotat per dies* x—*Eruptio.*—*Dr. Scott writes the notes of his cases in short hand!* Such is the system of clinical instruction for which these men annually receive large sums of money from pupils attending the Hospital.

as somewhat singular. It was not moveable, as the common encysted tumours of the upper eye-lid usually are. With a view of ascertaining its nature, Mr. Green punctured the tumour with a lancet, blood only followed the incision. This puncture was made about a week after the child's admission; and from this time the tumour appeared to increase rapidly. Mr. Green therefore determined on operating for its removal: this was done on Tuesday, May 9th.

A transverse incision was made through the integuments of the lid covering the tumour, and Mr. Green then attempted to dissect it out. This was a task of much difficulty, and occupied a great length of time; as the tumour was not encysted, it only came away piece-meal, and its adhesion to the periosteum of the orbit and to the tunica conjunctiva, complicated the operation still further. There was considerable bleeding from wounded arteries, but it was principally stayed by compression. On looking at the portions constituting the tumour, they had an appearance of fat; but on pressing them firmly between the finger and thumb, they readily broke down in the manner of brain.

Irritable Tumour of the Breast.

J. M., a healthy looking young woman, 19 years of age, has had disease of the breast for six months, but it has become worse within the last two months. There is no distinct tumour to be felt in the breast, but it is so exquisitely sensible that the patient recedes at the slightest touch; it is a darting pain, which extends down the arm. The patient says that her menstrual evacuations are regular, and she is not conscious of experiencing more pain in the breast just before the time of the menses appearing.* The bowels are regular, and, with the exception of pain in the head, she is in tolerable good health. The following plan of treatment has been adopted:

Pill of aloes with myrrh, 5 grains; to be taken twice a day.

Leeches have been applied to the breast; a soap plaster; and latterly, a plaster of belladonna has been put on the part.

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* Sir Astley Cooper considers this disease as mainly dependent on irregularity of the uterine secretion. In the present case there is no irregularity in *time*, but there probably is in *quantity*.

Fungoid disease of the Orbit.

The poor woman on whom Mr. Green operated a few months since for the removal of fungoid disease of the eye, has returned to the hospital with a fungus growing from out of the orbit. A report of the case and of the operation for extirpating the eye, was given in No. 127 of THE LANCET, from which it will be seen that the good state of the patient's health, the absence of glandular swelling, and, as it was considered, the entire removal of the disease, afforded good grounds for supposing it would not return. The operation was performed on the 27th of January, and the patient was dismissed a few weeks after, apparently well. In the course of two months after her return home, she began to experience great pain in the orbit; and shortly after a small fungous growth appeared between the lids. The fungus now protruding between the lids is of the size of a nut; she has a great deal of darting shooting pain, and her health is evidently suffering much.

Encysted Tumour on the Nates.

The tumour in this case was supposed by Mr. Green to be of the encysted kind, and was of the size of a double fist. The patient, a young woman 19 years of age, described the tumour to be of two years' standing; it was productive of no pain, but of great inconvenience in the sitting posture. Mr. Green proposed an operation for its removal, but the patient became alarmed, and suddenly left the hospital.

Mr. Tyrrell admitted the following cases into the Hospital on Thursday, April 4th:

Males—Fistula in perinæo; amaurosis; sores on the head; ulcer of the leg; pain in the knee; fistulous opening in the right loin; chronic enlargement of the knee-joint.

Females—Chronic disease of the ligaments of the ancle joint; abscess in the tympanum; dislocation of the scapular extremity of the clavicle; lateral curvature of the spine; abscess beneath the patella; hæmorrhoids; steatomatous tumour on the hip.

Fistula in perinæo.—This arises from abscess, and is only of a few weeks' standing. Mr. Tyrrell considers it to be unconnected with the urethra, and that it will probably heal without the necessity of dividing it.

Case of Amaurosis.—This occurs in a middle-aged man, as the result of recent internal inflammation, by means of which the pupillary margin of the iris in each eye has become adherent to the anterior capsule of the lens. We shall speak of this case more fully at a future period.

The sores on the head and the ulcer on the leg do not require any further notice.

The case of *pain in the knee* was believed to be a *feigned* disease; the application of a large blister has entirely removed it.

The *fistulous opening in the loin* occurs in a young man, and is apparently connected with disease of the rib.

The chronic enlargement of the knee-joint has been treated with the application of blisters and rest; the patient is much relieved.

The chronic disease of the ligaments of the ancle is in a young woman; there is considerable swelling and tenderness on pressure. The patient has been directed to keep her bed, and the tartar emetic ointment has been applied so as to produce a crop of pustules around the joint.

Abscess in the tympanum.—The patient in this case is a young woman of spare habit and unhealthy aspect. She has had disease of the ear upwards of eighteen months. It appears from her account that for many weeks she experienced pain of a most excruciating description in the ear, until at length a discharge of matter afforded her great relief. The ear has continued to discharge from this time, at first the matter was exceeding offensive, but is now apparently healthy. The sense of hearing is totally destroyed, but there is a constant rumbling noise in the head, which has been much relieved by the application of blisters behind the ear since her admission into the Hospital.

Mr. Tyrrell considers there has been an abscess in the tympanum, which was allowed to burst by ulceration, and from the purulent discharge having continued so long that caries of the tympanum may occur.

ST. BARTHOLOMEW'S HOSPITAL.

A singular case of supposed severe Injury to the Head from a fall.

—— Dorharty, an athletic Irishman, 38 years of age, was brought to this Hospital on a shutter, about nine o'clock on Thursday morning, March 21, having fallen off a high scaffolding. It appeared that the man was employed in building the new Scotch church, which is situated in the neighbourhood of Gray's Inn-road, and that, whilst at work, the boards on which he was standing gave way. From the distance which the workmen had to bring him, some considerable time elapsed between the occurrence of the accident and his arrival at the Hospital. The height from which he fell was equal to four stories, but the effect of the fall was greatly lessened by his coming in contact with a poll which projected from the wall about two-thirds of the way down. This pole, or "break," as it is termed by the workmen (and in this case very aptly,) was broken by the force with which he fell against it. The man, when picked up was insensible, but when brought to the Hospital, he had in some measure recovered from the shock. A degree of stupor yet remained, and he required to be roused before we could get him to speak, even indistinctly. On examining the head, a striking peculiarity in the form of the cranium was observable; there was a very considerable depression of the superior-posterior portions of both parietal bones, so that the conical portion of the occipital bone seemed to be left unconnected, at least as far as any apparent bony connexion went; and as the scalp was here only slightly lacerated, it had the appearance of a large tumour projecting from the posterior part of the cranium. This was considered by every one present to have been occasioned by the fall, and consequently, that it was nothing more nor less than an extensive fracture with depression.

As Mr. Lawrence had been sent for, (it being his accident week,) all now anxiously awaited his coming. In the interim, the aid of the *tonsor* was called in to *decorticate* an incrustrated lamina of dirt and filth which encompassed the supposed seat of injury. When Mr. Lawrence arrived, he inquired into the nature of the accident; the head was casually examined, and the instruments ordered to be sent for. The pulse at this time

was 66 and feeble; the respiration 18, and the surface of the body cold. He was occasionally sick, but he only brought up a little watery secretion. He appeared sensible of what he was about, as he made signs for the pupils to stand aside when he wanted the bason. A slight degree of stertor was observable in his breathing, and occasionally a little blood flowed from his nose. The head had now undergone a closer examination, and the propriety of an operation began to be doubted. Mr. Lawrence said, that almost in every case in which he had seen the operation performed, the individuals had died, and that in this case there appeared to be so much injury done, he really considered the operation would be useless—the man must die in the course of a few hours, and probably he should be only hastening this event, were he to undertake the operation. He said, that he would call again at 5 p. m., and in the mean time desired that the man should be kept very quiet.

5 p. m. Remains just the same; he is rather more comatose than he was on our last visit. The pulse continues very slow. Pupils rather dilated. The man's wife had now arrived, and she begged that nothing would be done for the "bump behin:," as it was always there, and that every one of her husband's family had a similar one. Little attention, however, was paid to this communication, as the belief of their being an extensive fracture was firmly impressed on the minds of every one. Ordered to have a dose of house medicine given to him.

22. Found, on visiting the patient to day, that he had passed a tolerable night; he had taken a little tea. He is now quite sensible, and the sister of the ward informs us, that he got up this morning to have his bed made. Some credence was now placed in the wife's communication. This morning he became sick and vomited nearly three pints of a bilious kind of fluid. The skin is now of its natural temperature, but the pulse continues exceedingly slow (50.) The irides again perform their natural functions. He is free from pain in his head, and the only thing he complains of is a soreness in the back of his neck. The house physic was repeated this morning, but as the bowels had not acted when Mr. Lawrence saw him (one o'clock,) he desired that a dose of calomel and jalap (4 grains and 12) might be given to him immediately, and this to be followed up in three hours by a common enema, containing four ounces of house medicine, unless the bowels should have been previously relieved; the following draught likewise to be taken every six hours:

Common saline mixture, one ounce and a half;
Sulphate of magnesia, 1 *drachm.*

23. No unfavourable symptoms. Has had some refreshing sleep during the night. Bowels have acted twice since yesterday. Head free from pain, but still complains of being very uneasy in his back. Pulse 70, and very feeble; tongue moist.

24. Bowels freely open, and he is able to walk to the water-closet. The wounds in the scalp, which have hitherto been dressed with adhesive straps, to-day have a tendency to suppurate; a poultice was therefore ordered to be applied over the posterior wound, which is about two inches in extent, and, as there is a little puffiness, with an inflammatory blush surrounding the one in front, cold wet cloths were ordered to be kept constantly applied over this part. Pulse 60; tongue slightly loaded, but moist.

25. Free from pain. Bowels open; tongue moist; skin cool; and in every respect better.

27—31. Since our last report he has gone on progressively improving. The puffiness about the right eye-brow has almost entirely subsided within the last two days; and the wounds of the scalp are healing kindly.

The appetite begins to return, and since yesterday he has been up walking about the ward. The pulse continues unusually slow and languid.

As it was now evident that the protuberance on this man's head, was the result of natural conformation, it was natural to suppose that his cerebral functions must be influenced by it, and moreover, that the organ assigned to this part would be in a high state of activity. Mr. Lawrence therefore, questioned the man on the subject of his children; it was enough, "he didn't care if his master would allow him his week's wages for his poor dear *childer's* sake."

By the 5th of April the wounds of the scalp had perfectly healed, and the poor fellow was in consequence discharged, as he said, "as well as ever he was." At Mr. Lawrence's request he visited the Hospital about three weeks since, and was then in the enjoyment of robust health.